

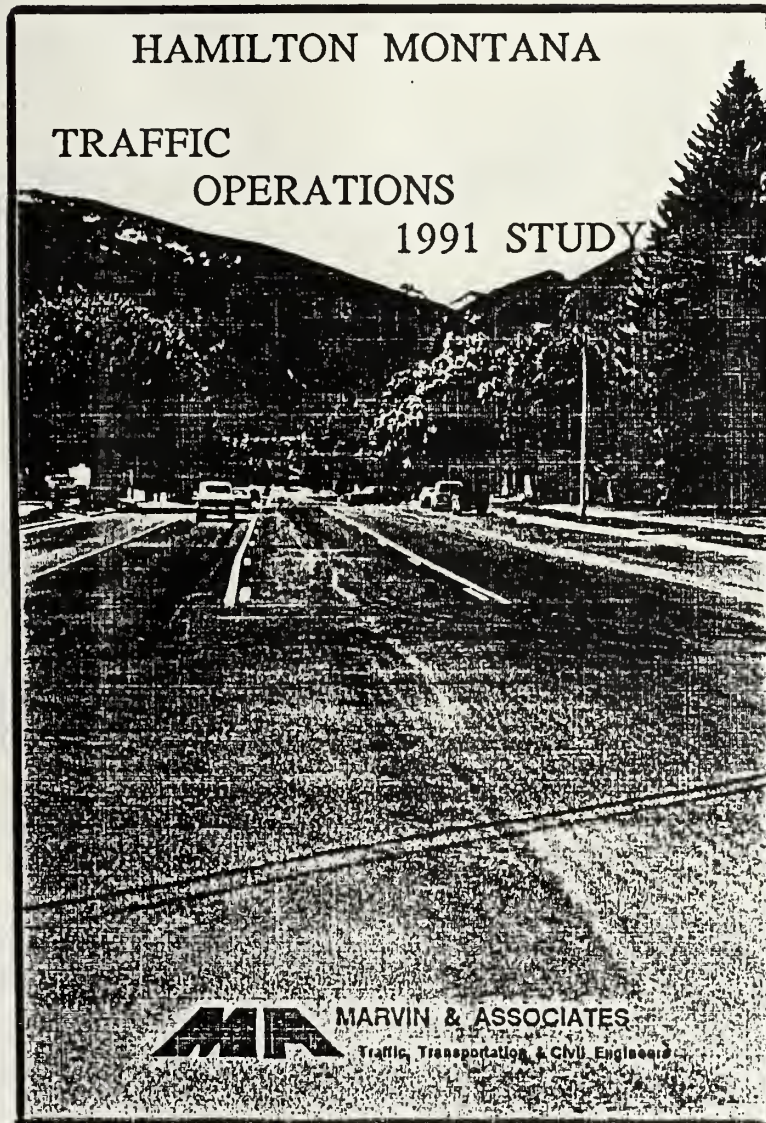
1991 Hamilton  
388.4 traffic operations  
M26htos study  
1991  
C.2

STATE DOCUMENTS COLLECTION

NOV 25 1991

MONTANA STATE LIBRARY  
1515 E. 6th AVE.  
HELENA, MONTANA 59620


# TECHNICAL



## APPENDIX

PLEASE RETURN

SEP 2 1992

**MONTANA STATE LIBRARY**  
S 388.4 M26htos 1991 c.1 v.2  
1991 Hamilton traffic operations study /  
  
3 0864 00074831 2

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SECTION 1.

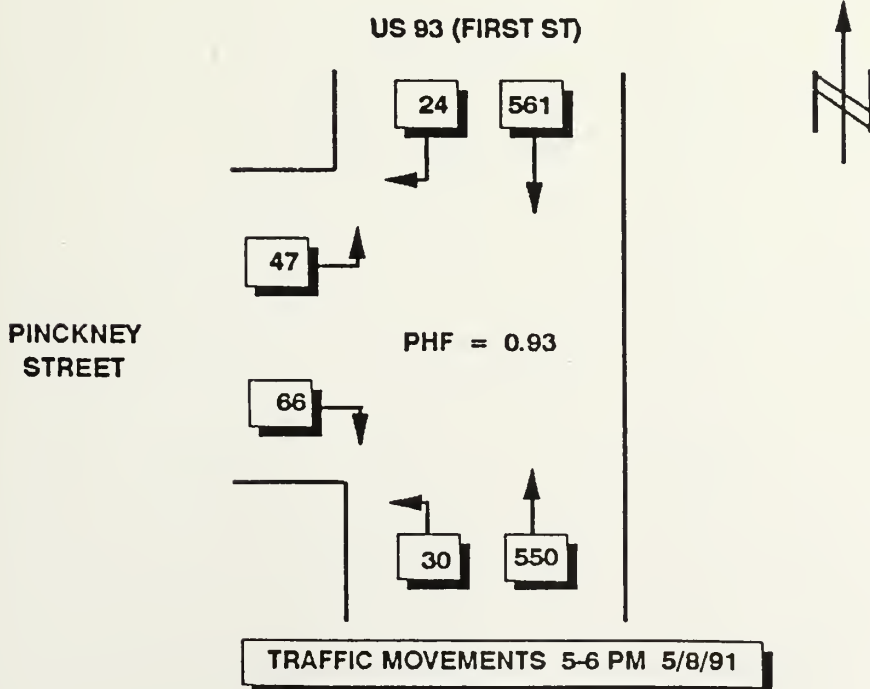
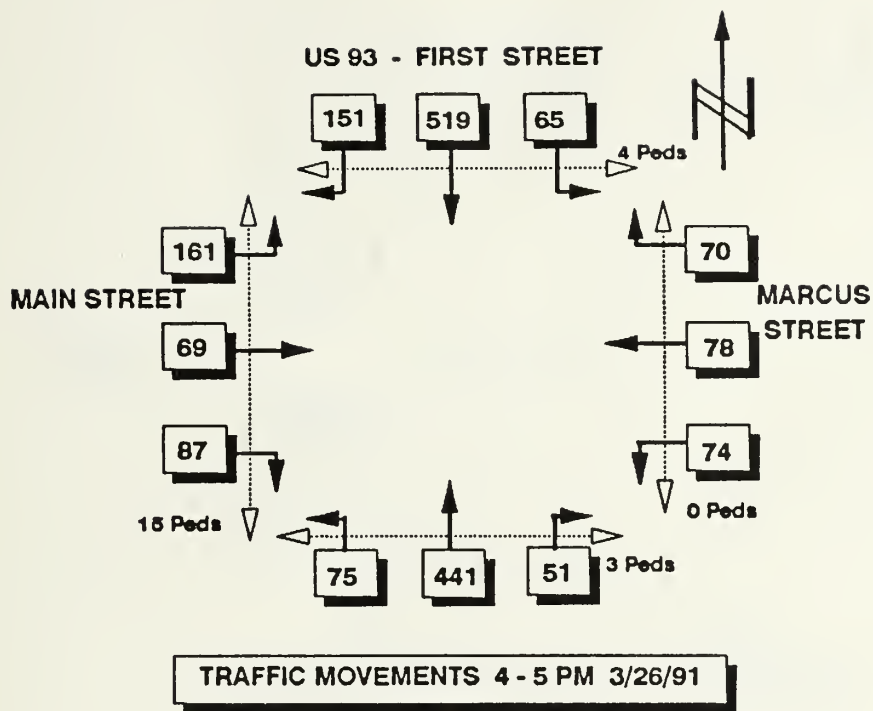
TURNING MOVEMENT VOLUMES

@ INTERSECTIONS



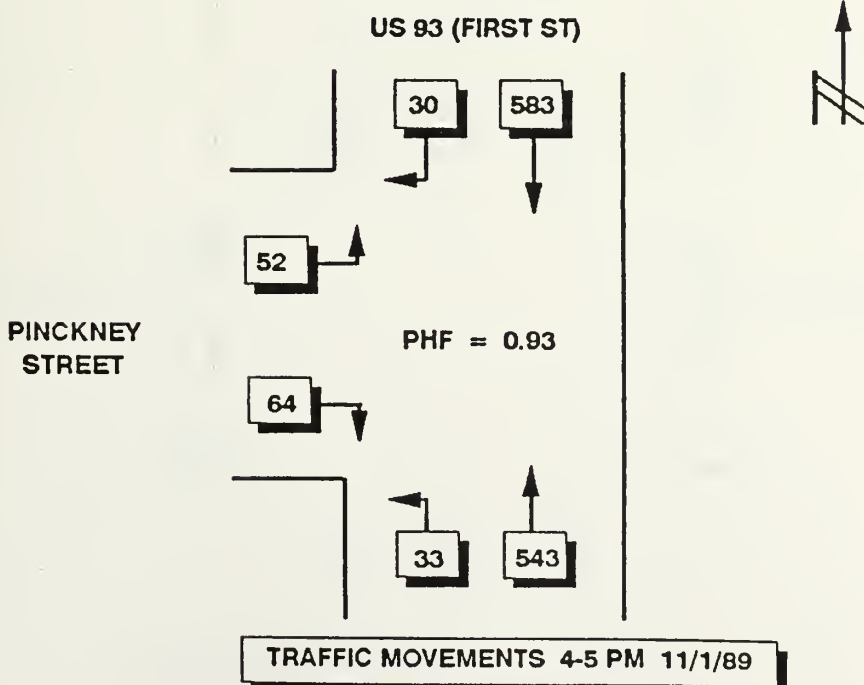
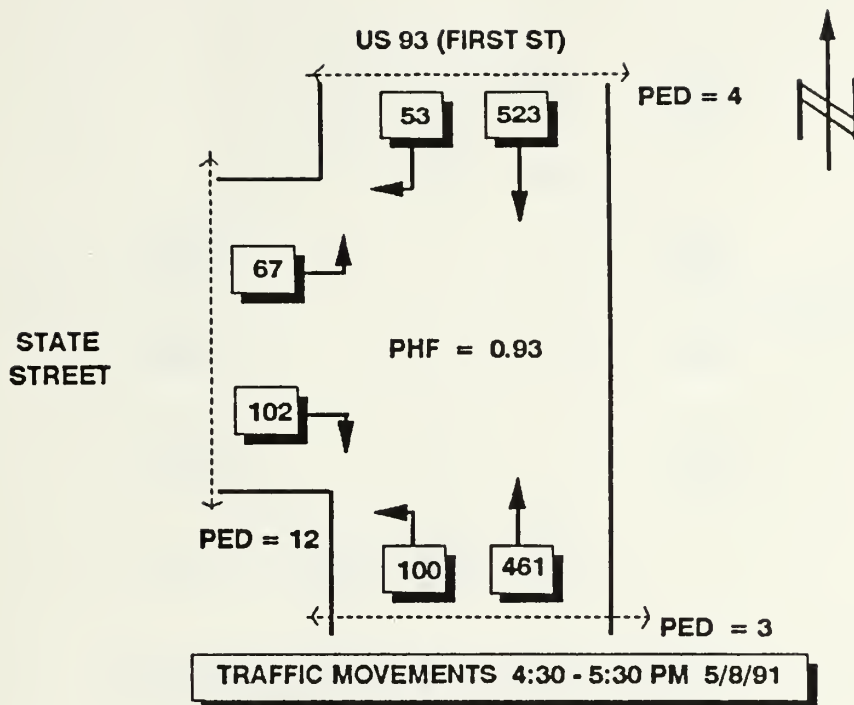
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in 2013

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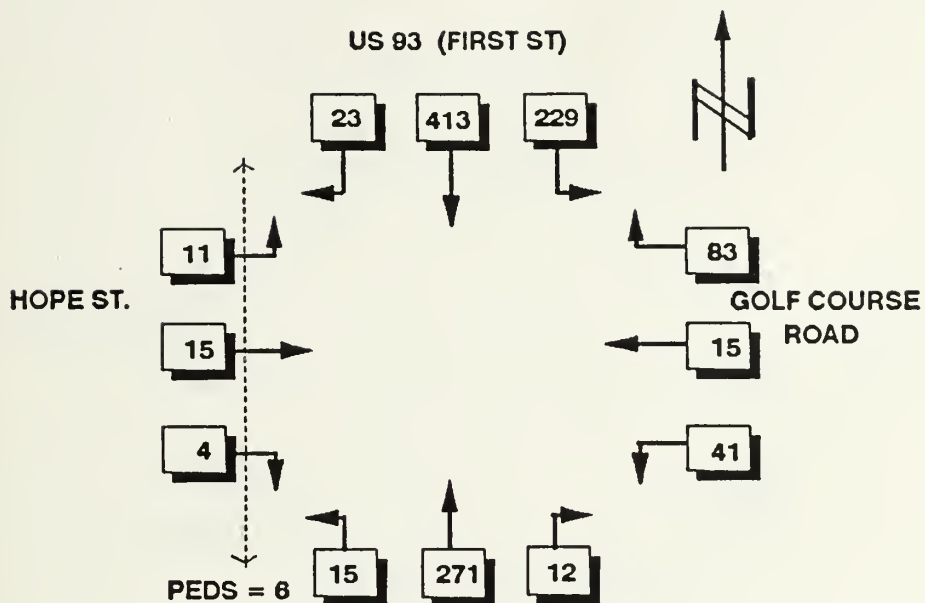




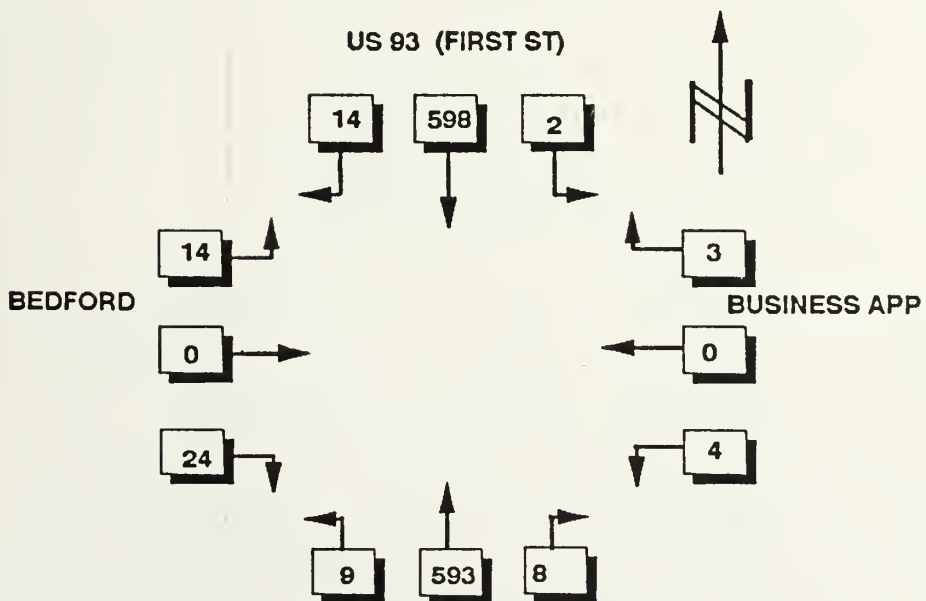






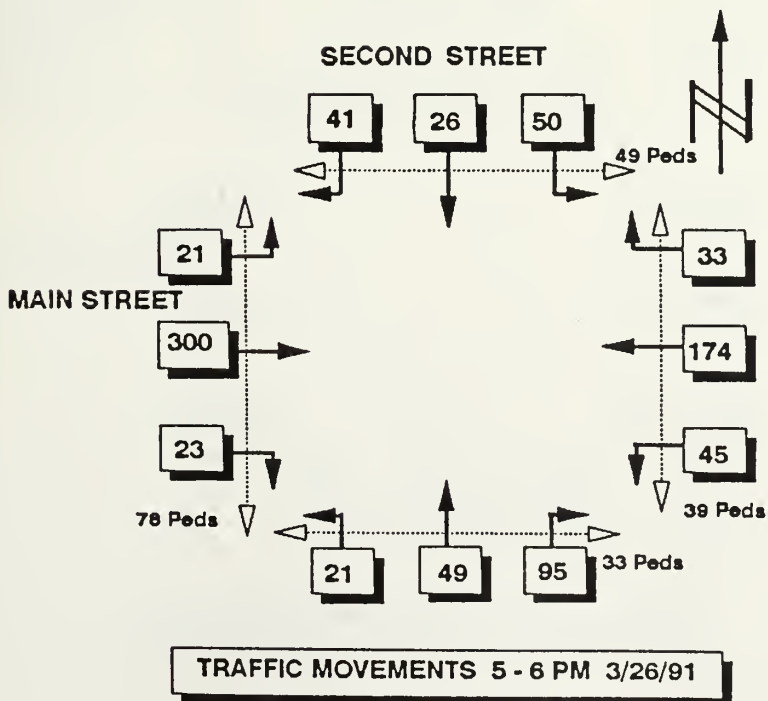
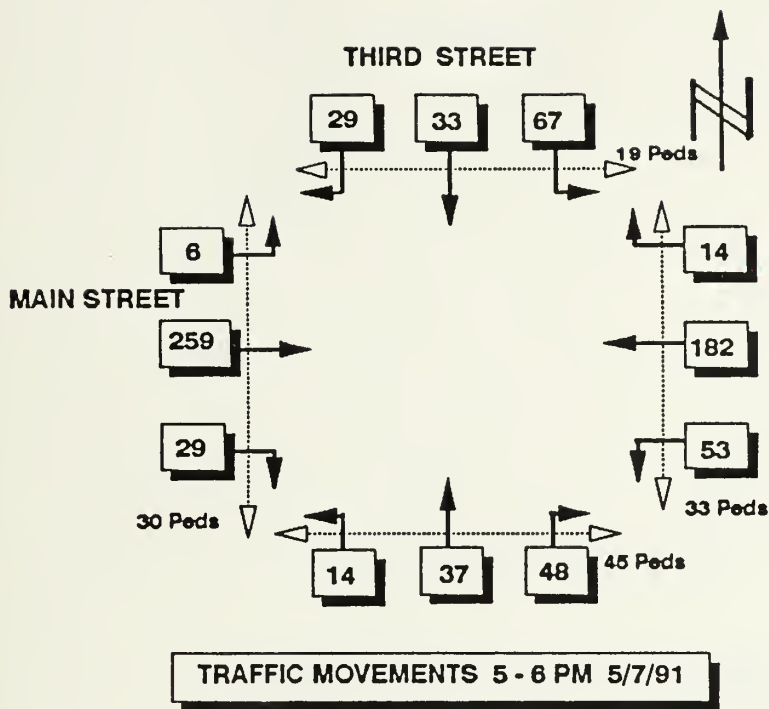


TRAFFIC MOVEMENTS 4:30 - 5:30 PM 5/7/91

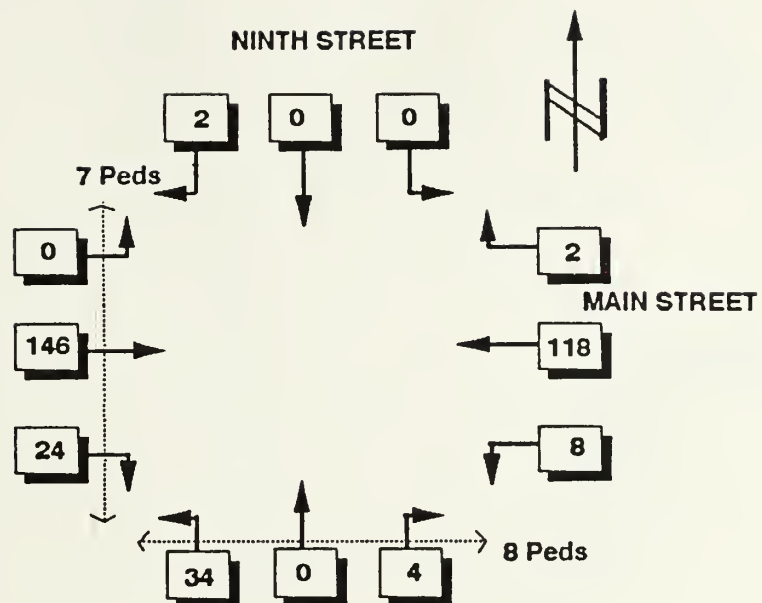


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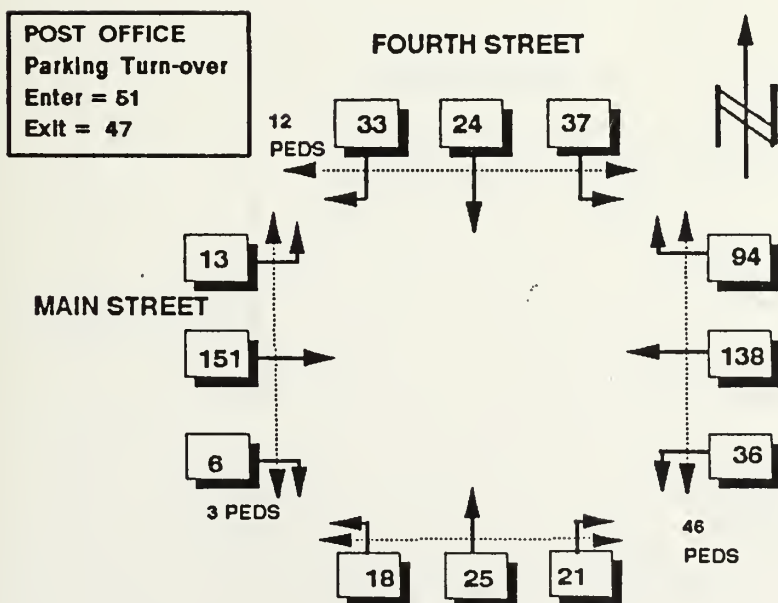








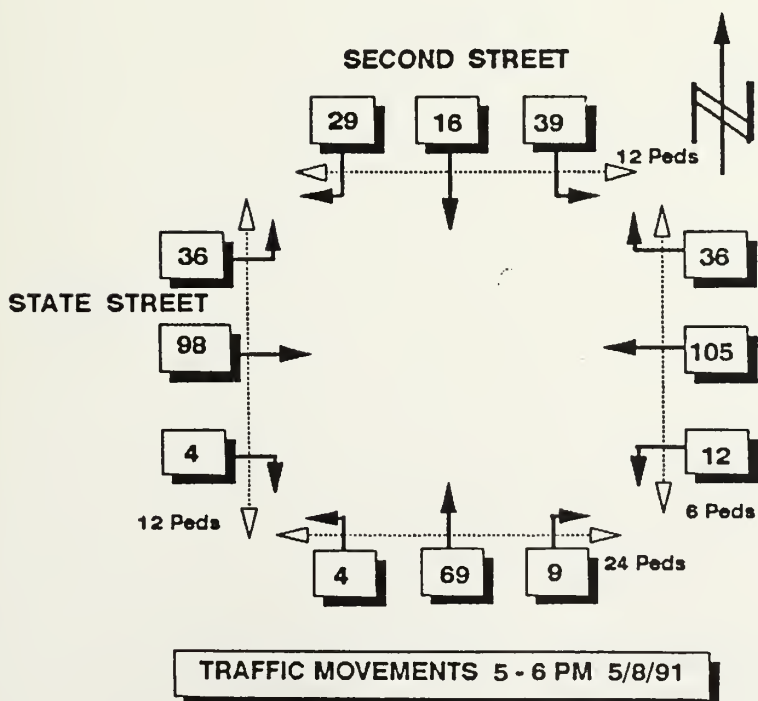
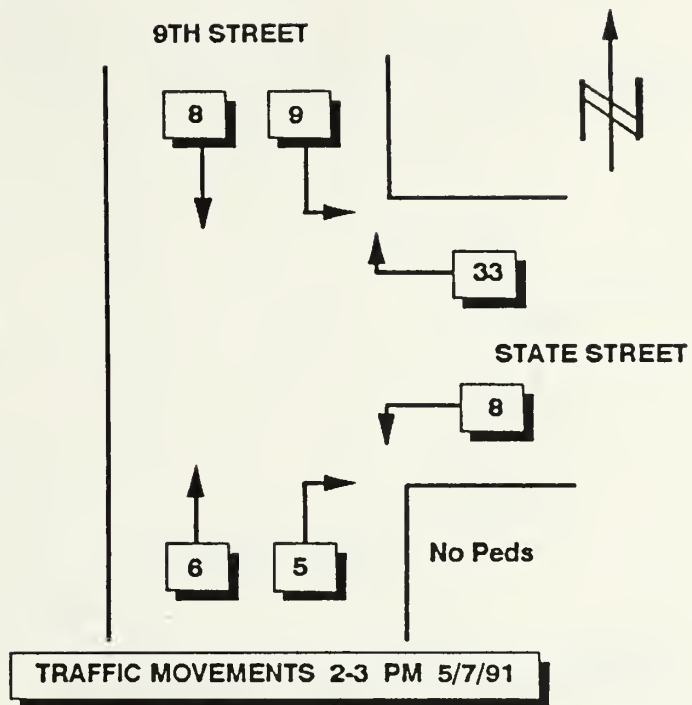
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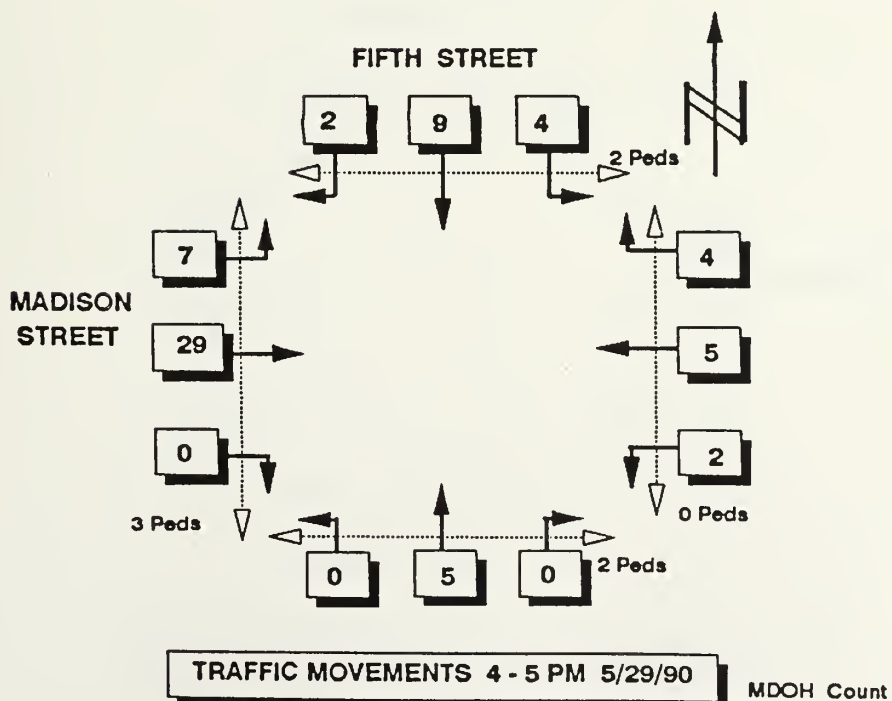
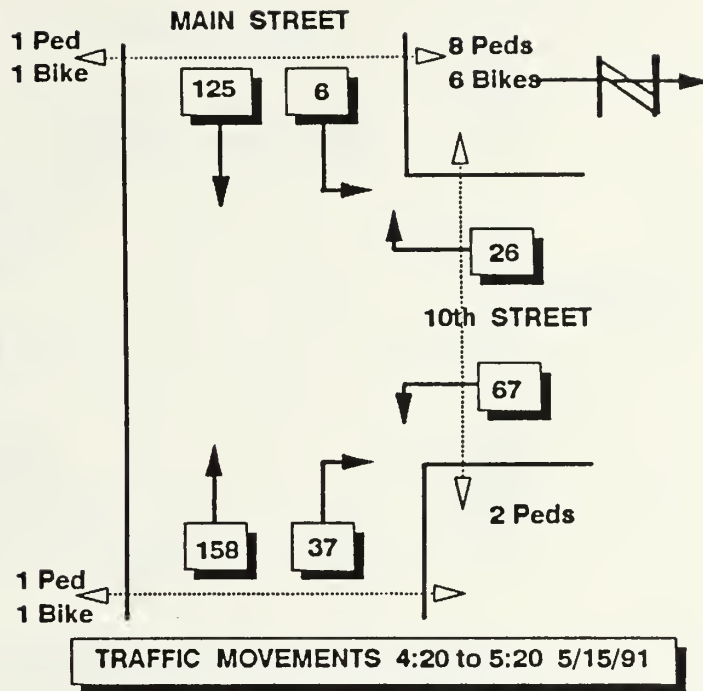
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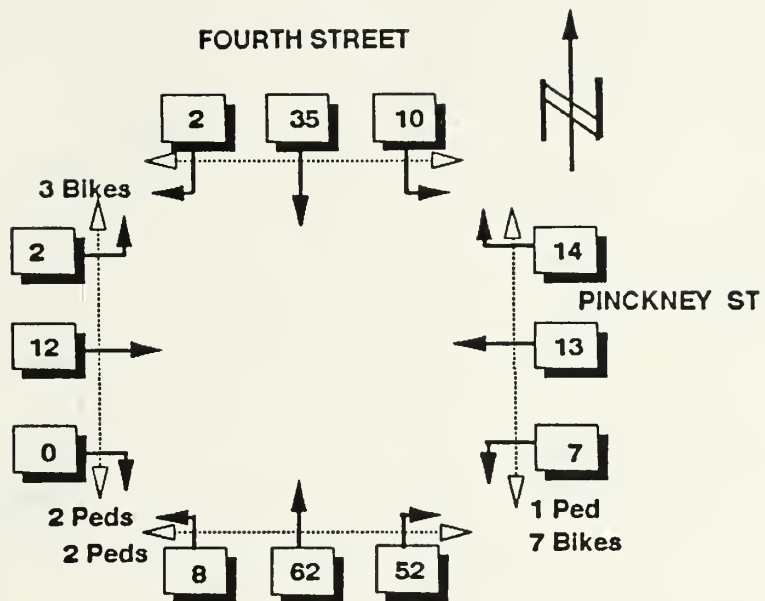




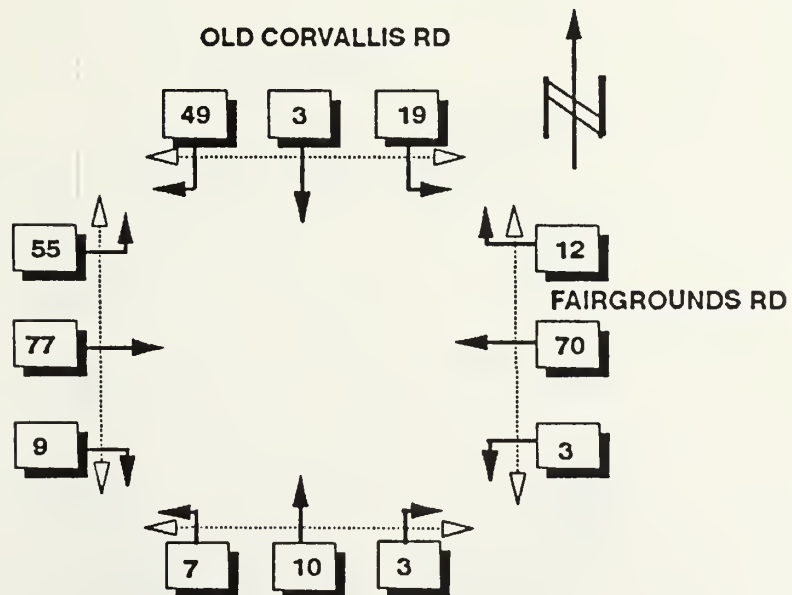






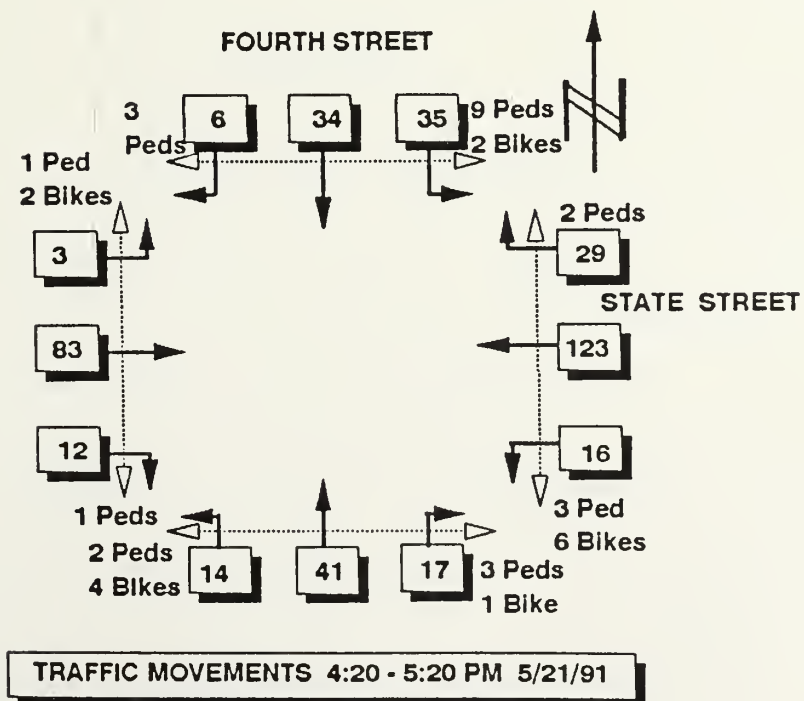
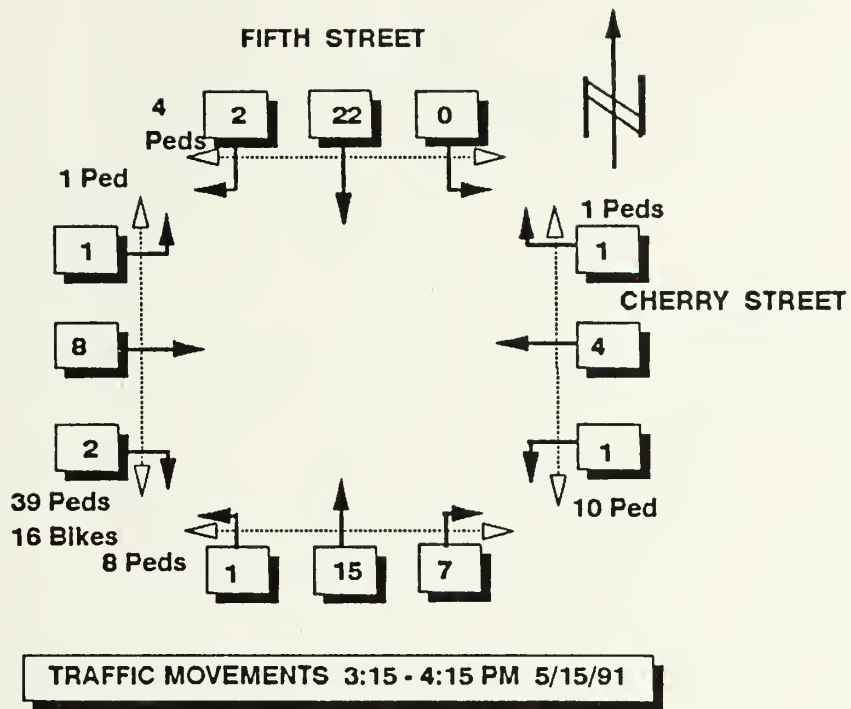


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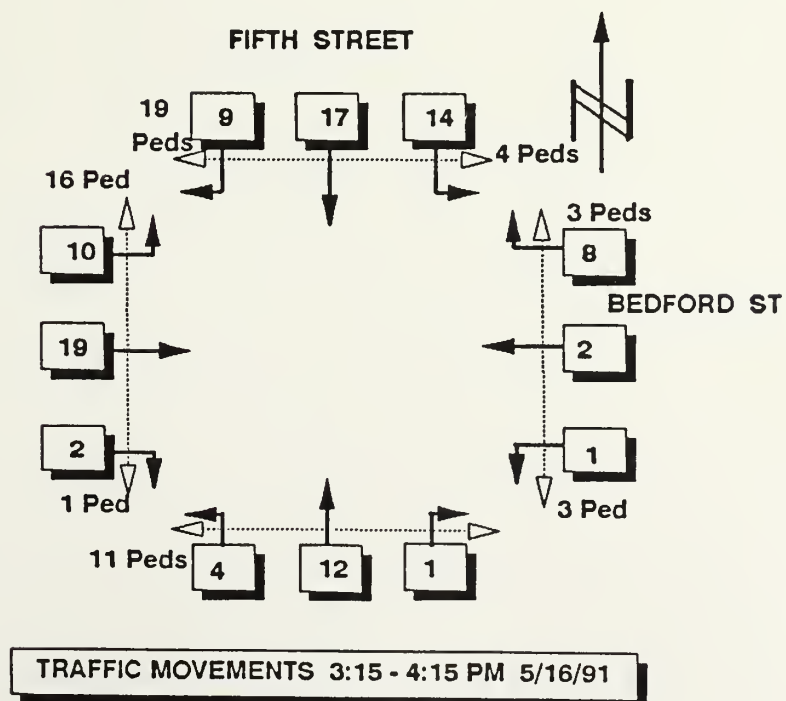
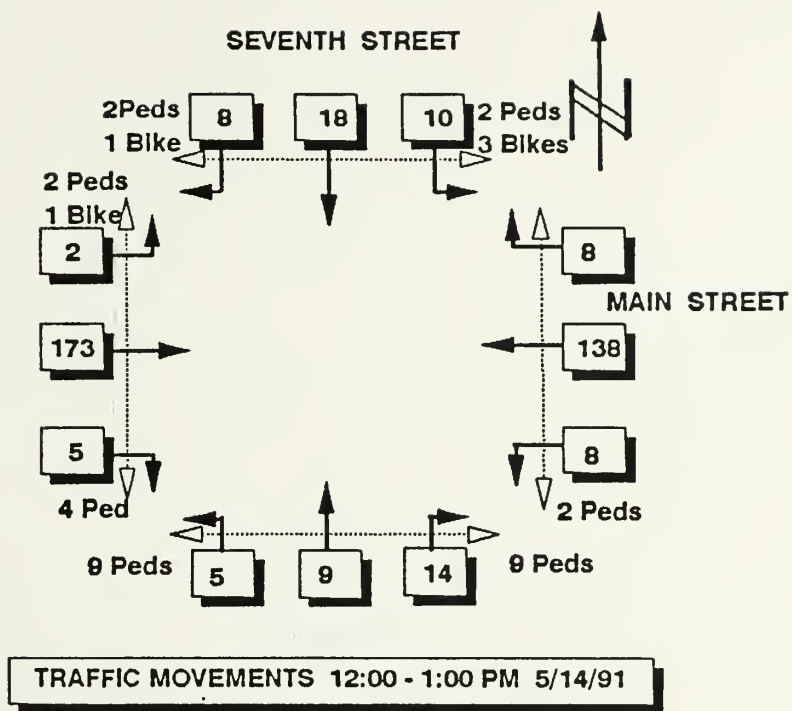
TRAFFIC MOVEMENTS 3:20 - 4:20 PM 5/23/91



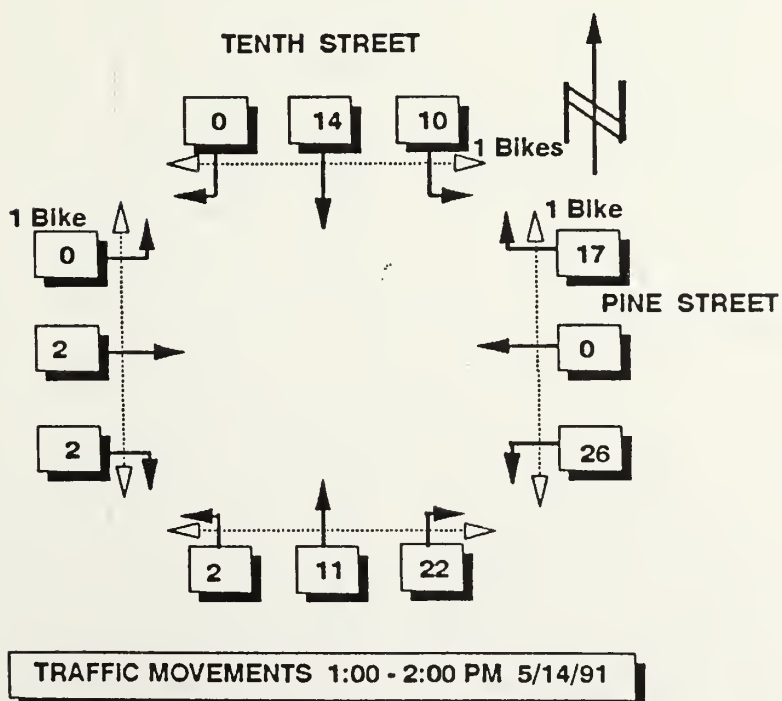
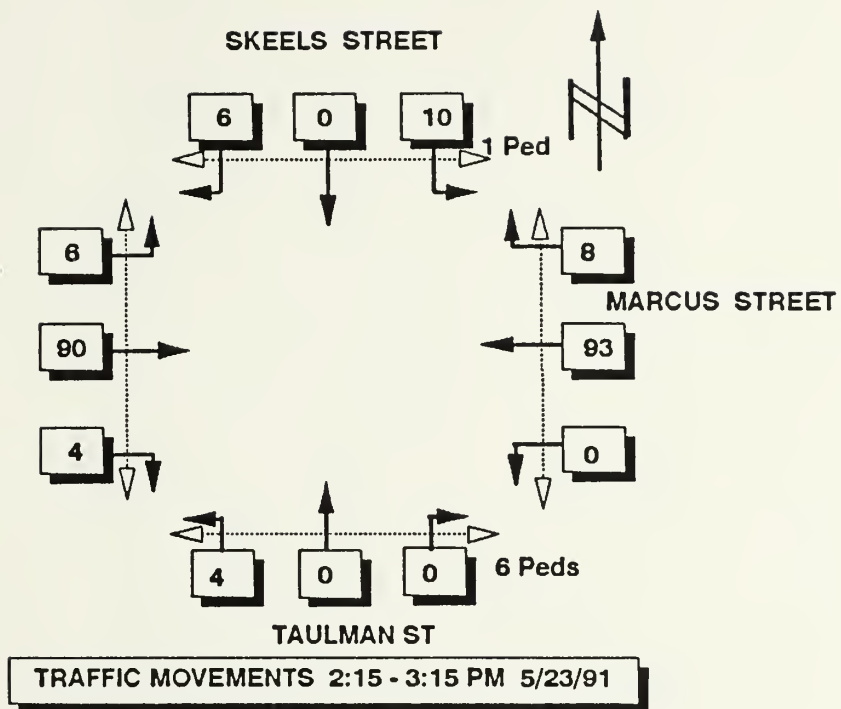




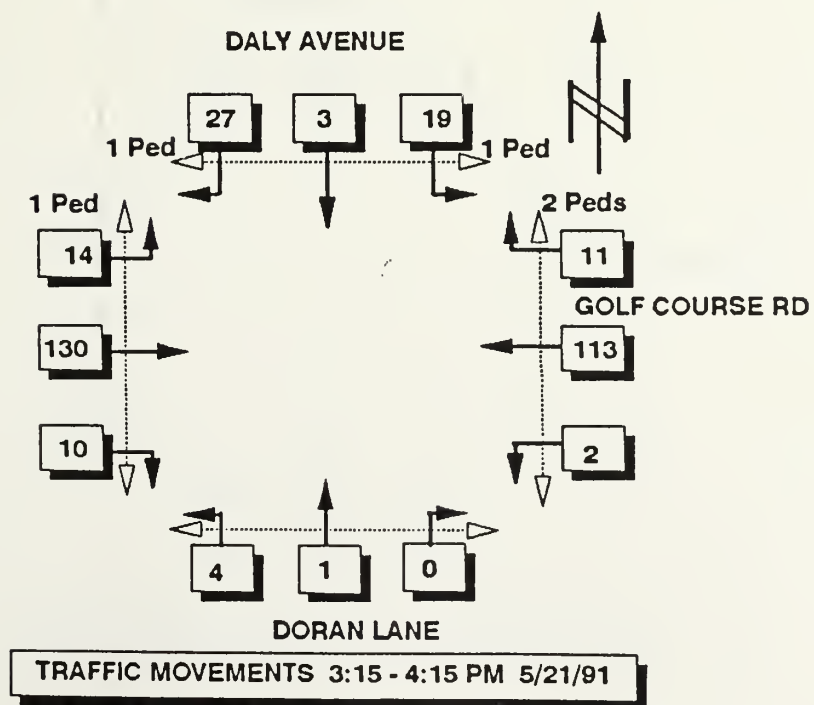
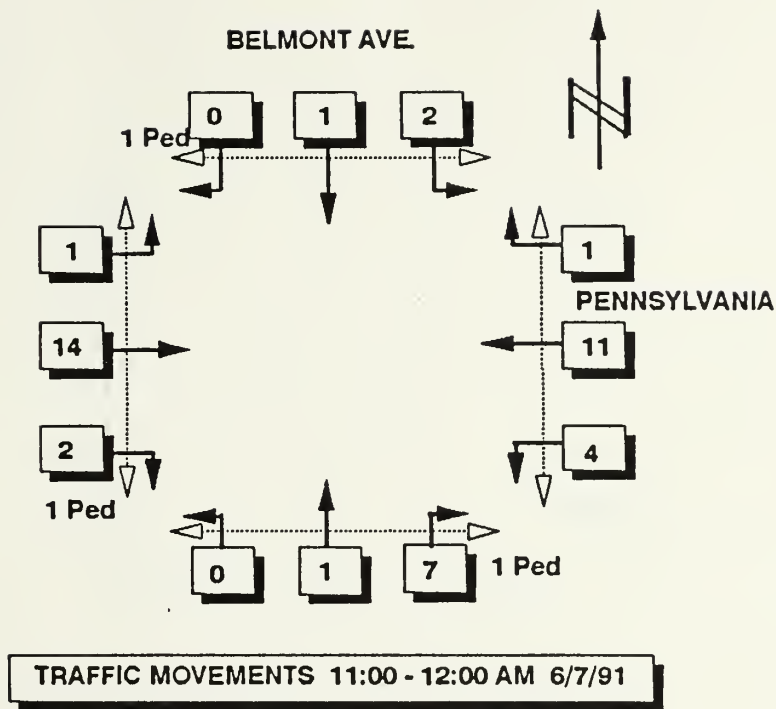




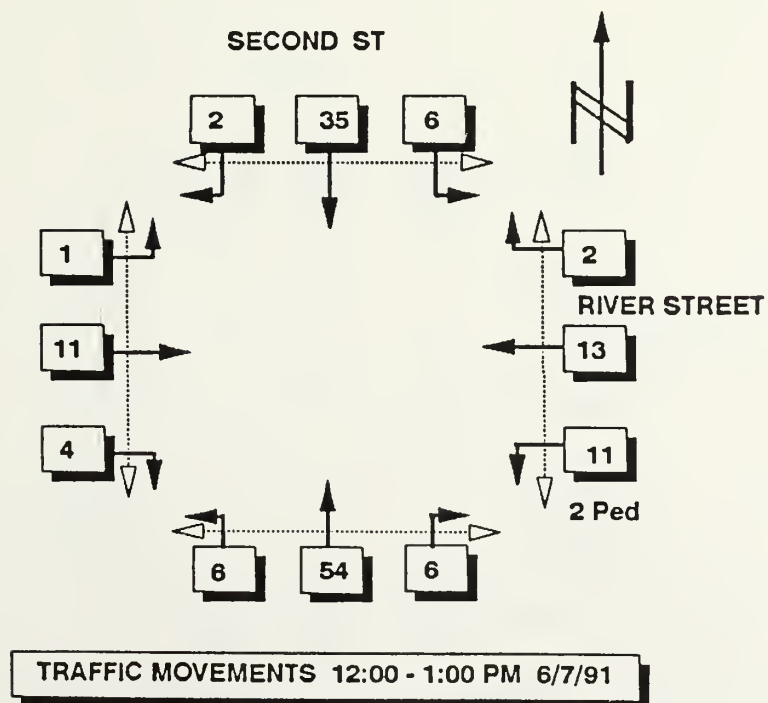
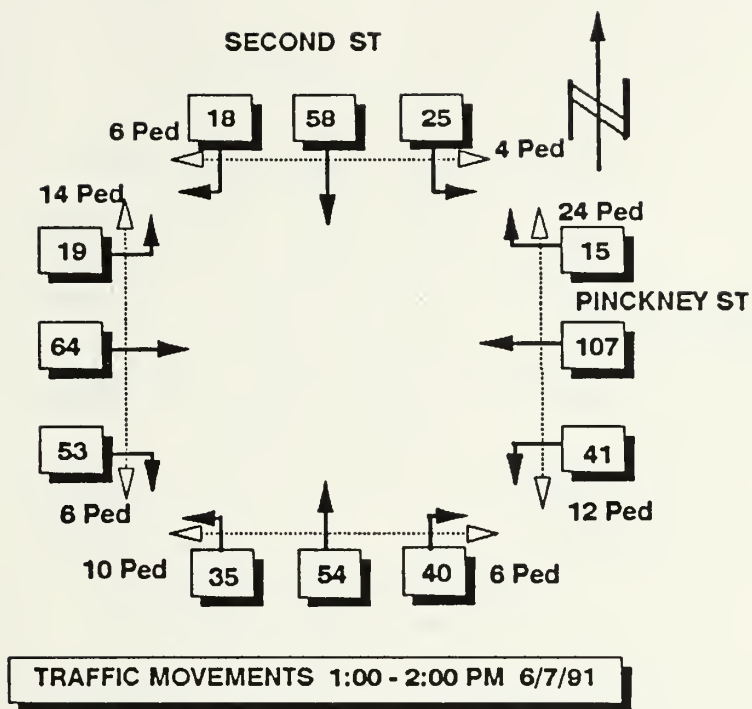






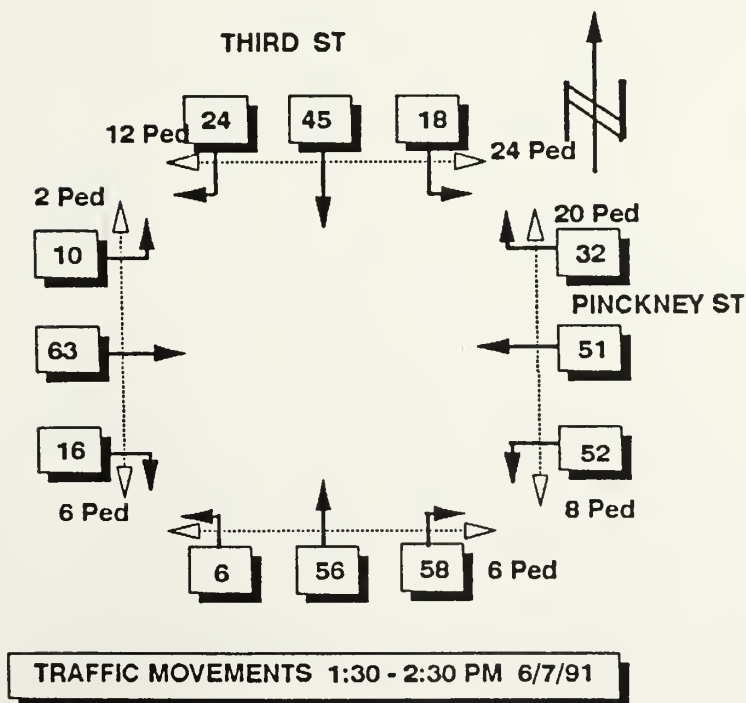
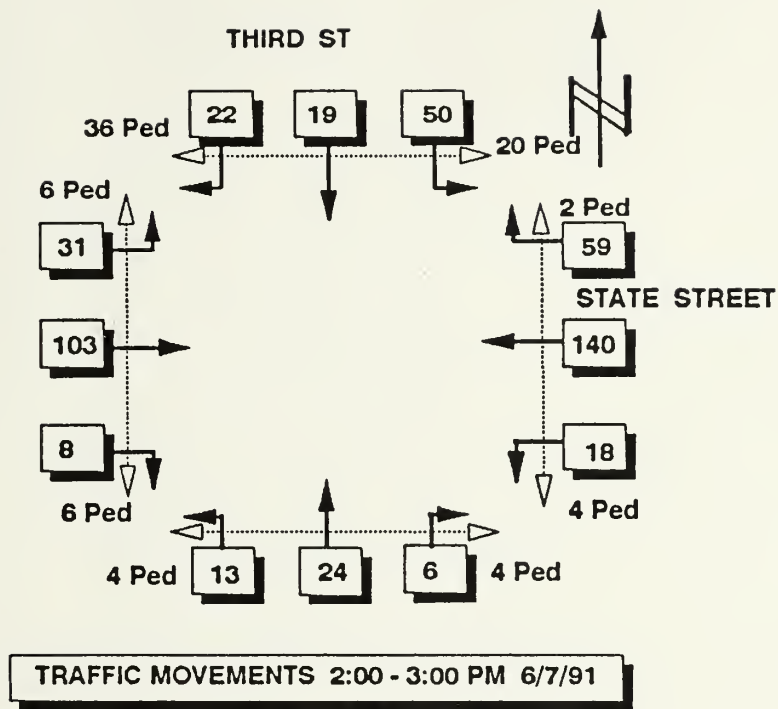




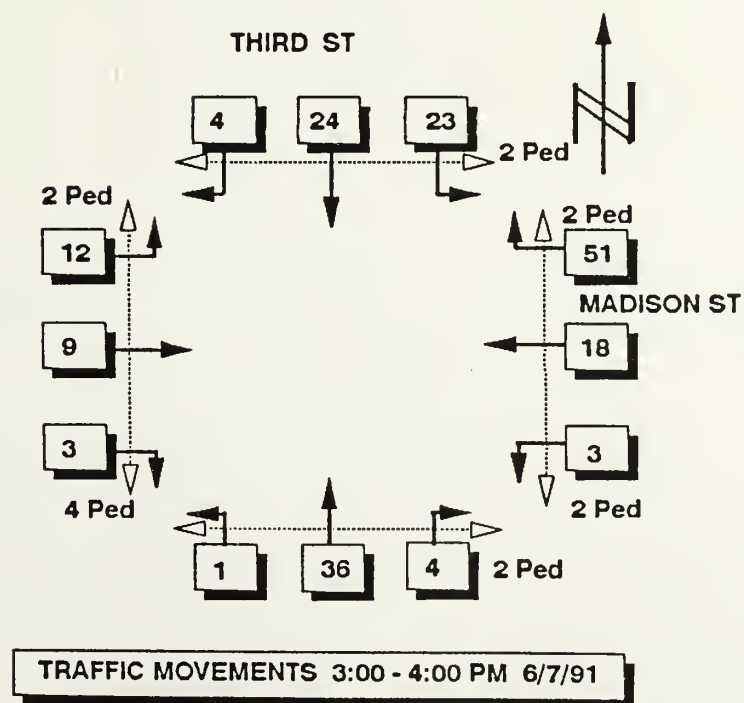
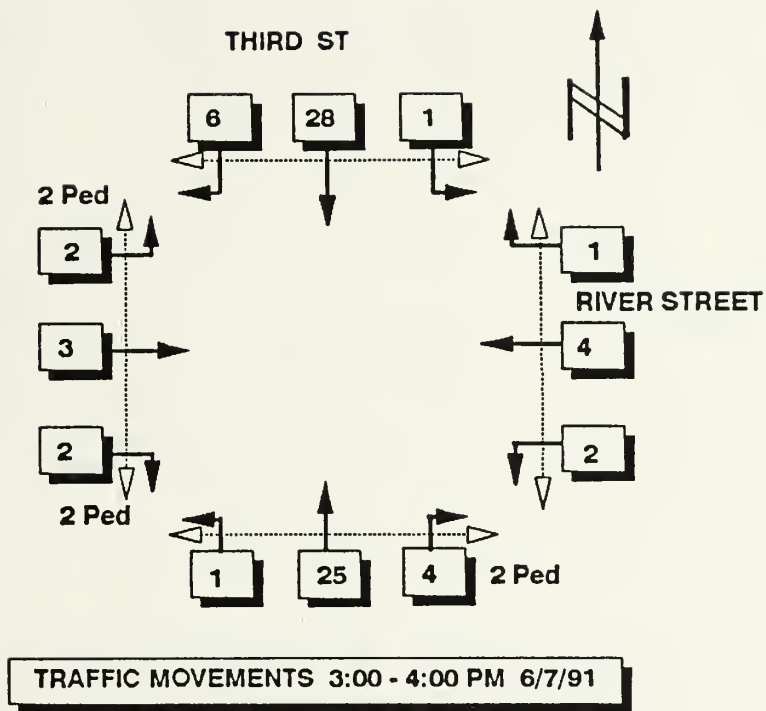




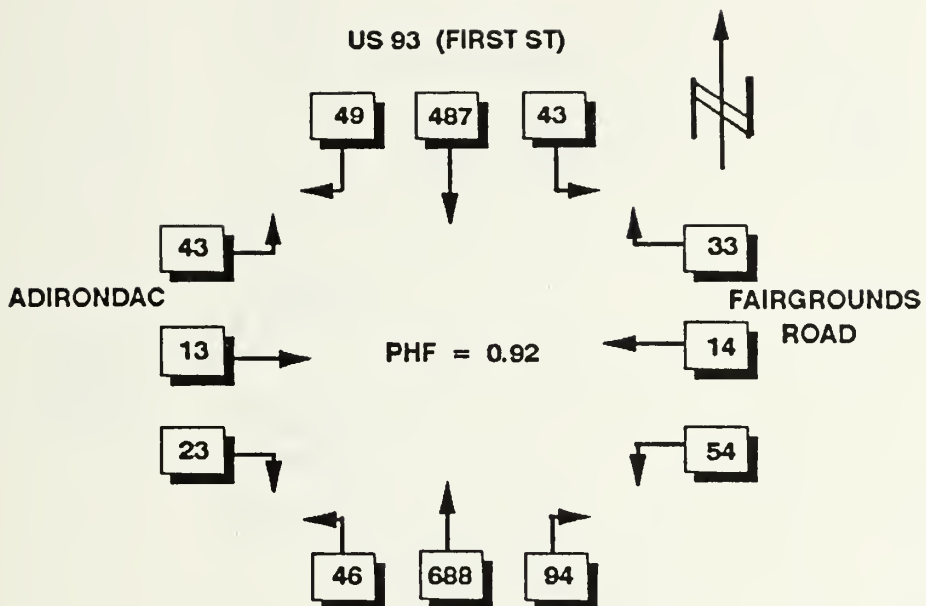




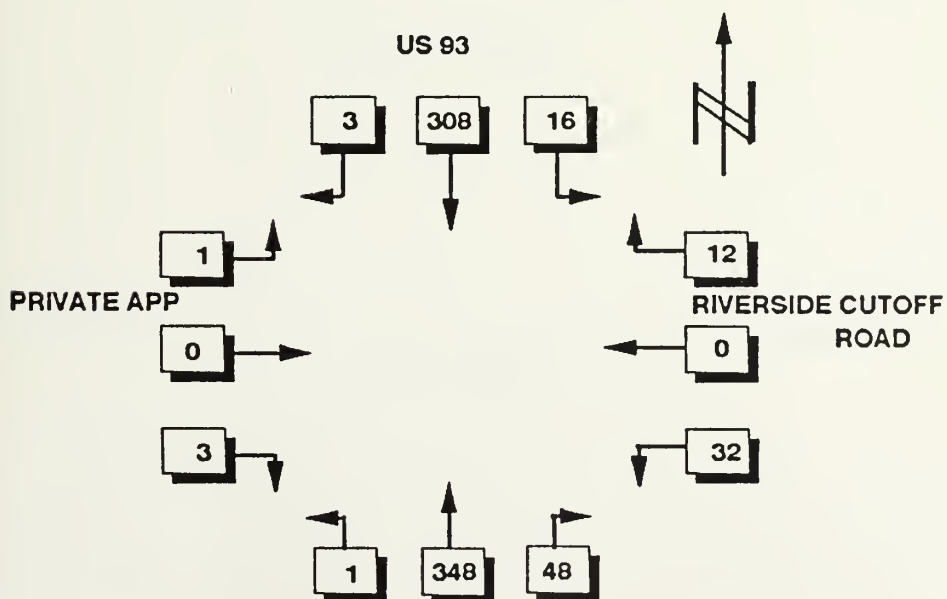






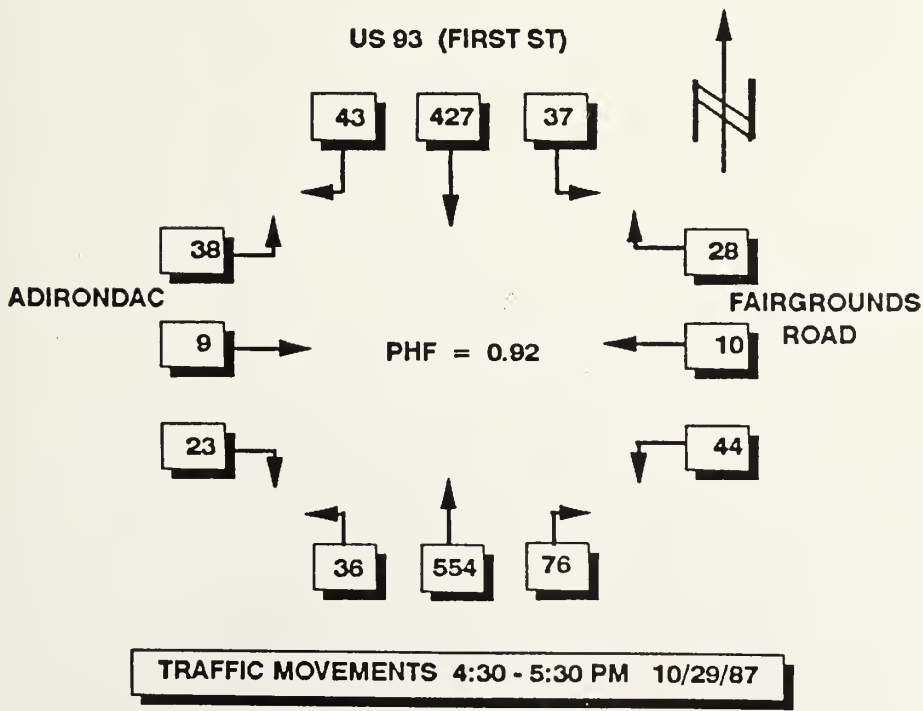
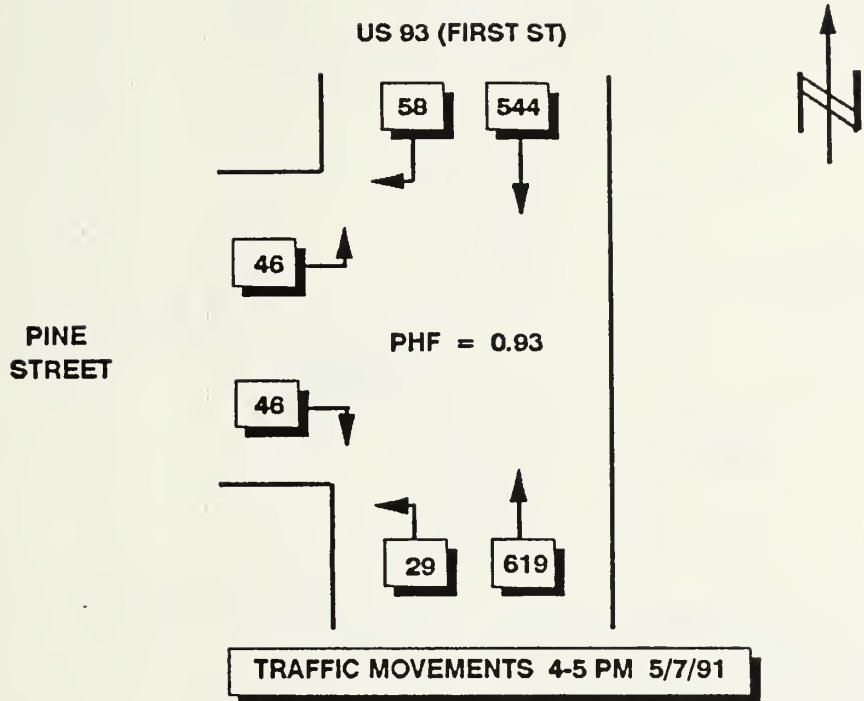


**TRAFFIC MOVEMENTS 4:30 - 5:30 PM 5/6/91**



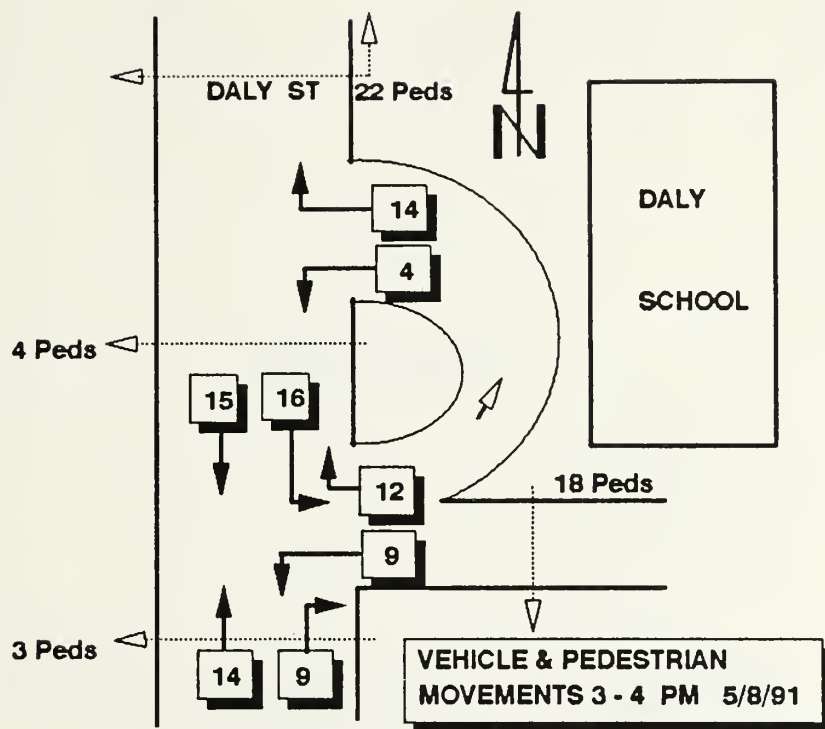
**TRAFFIC MOVEMENTS 4 - 5 PM 5/8/91**











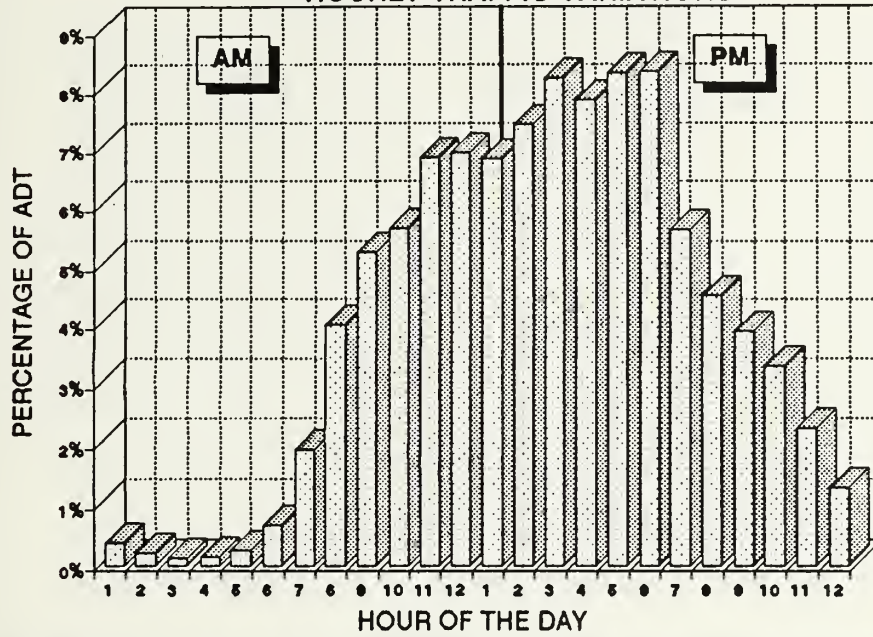


## SECTION 2.

### HOURLY TRAFFIC VARIATIONS VARIOUS STREETS .

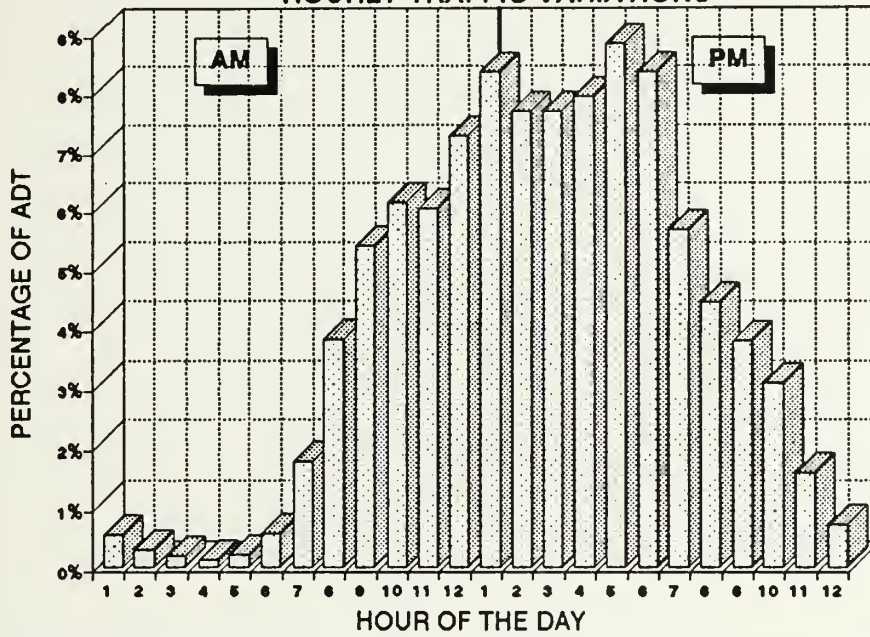


# MARCUS STREET EAST OF 1ST HOURLY TRAFFIC VARIATIONS





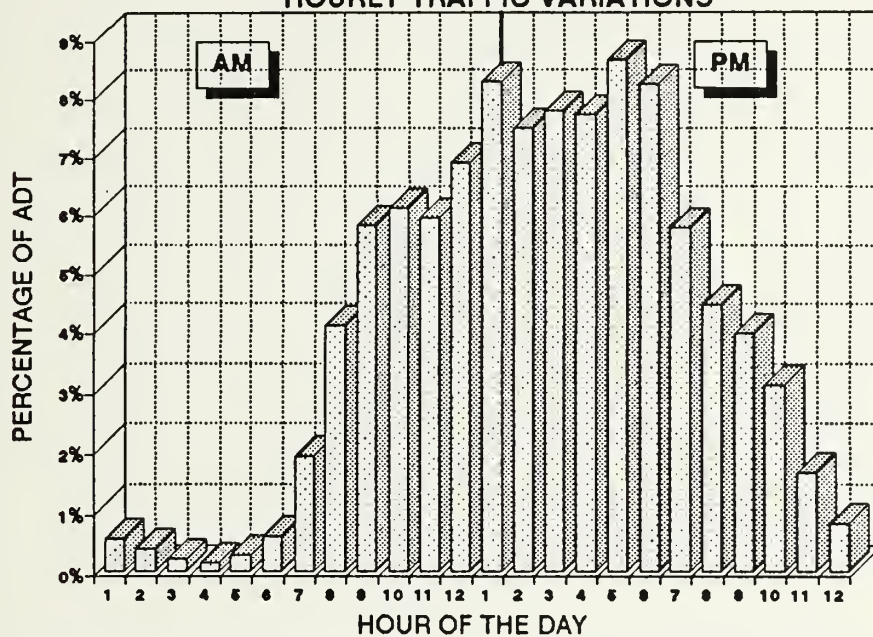
# US 93 (1ST) NORTH OF MAIN HOURLY TRAFFIC VARIATIONS





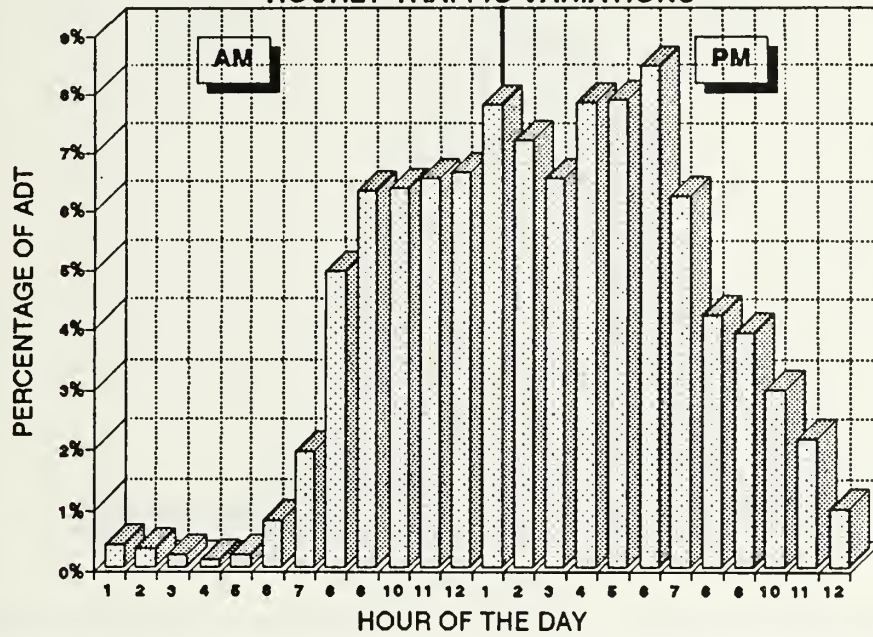


# US 93 (1ST) SOUTH OF MAIN HOURLY TRAFFIC VARIATIONS



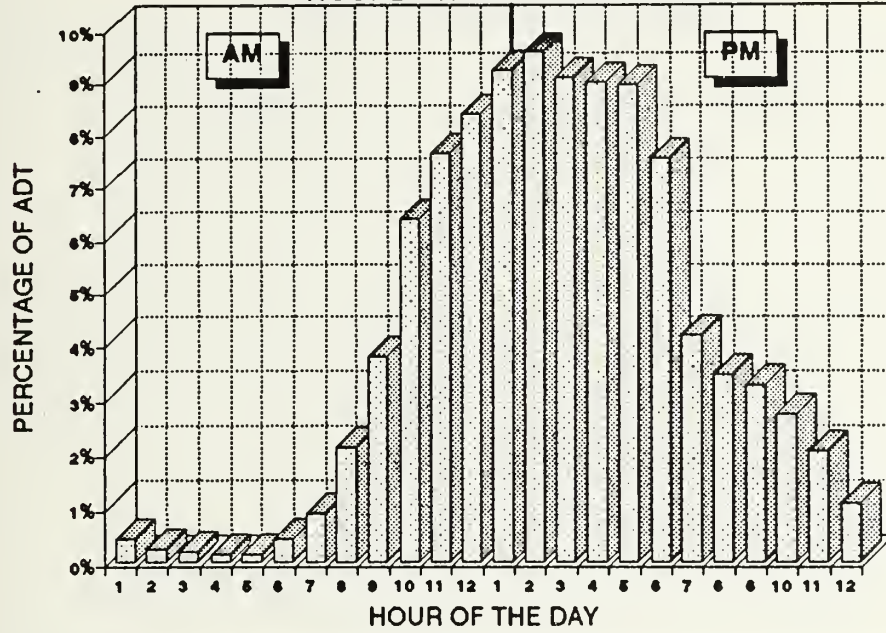


# US 93 (FIRST) N OF GROVE HOURLY TRAFFIC VARIATIONS



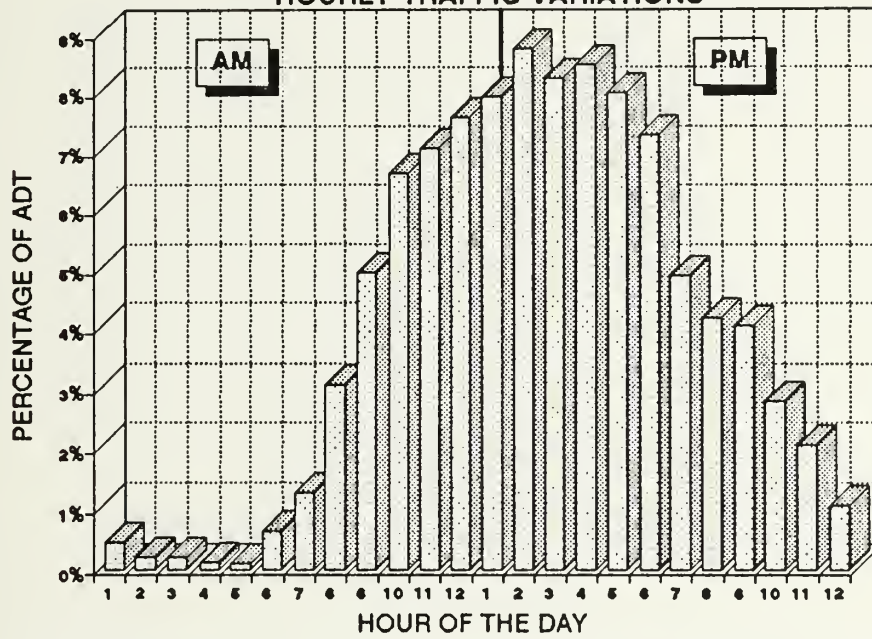


# MAIN STREET WEST OF FIRST HOURLY TRAFFIC VARIATIONS





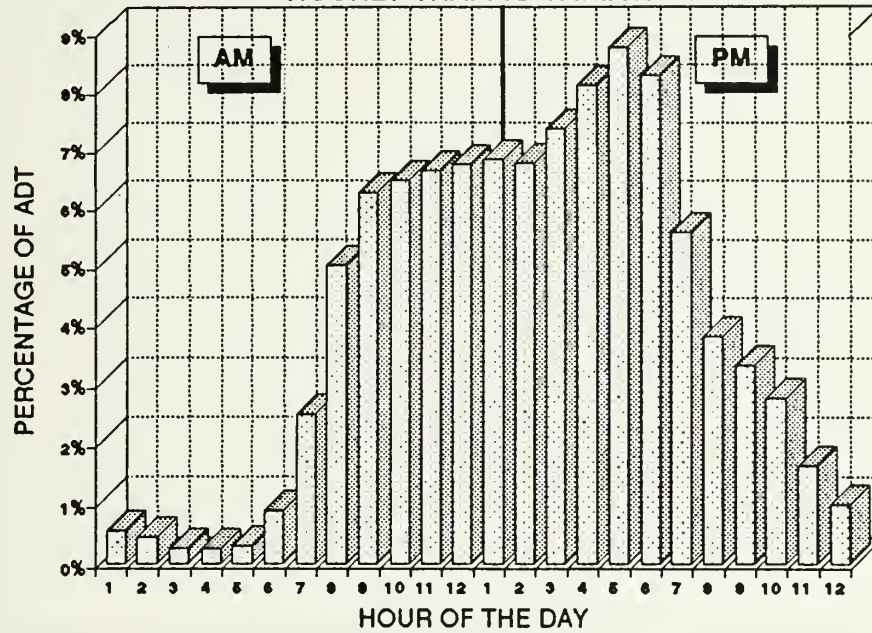
# MAIN STREET EAST OF 9TH HOURLY TRAFFIC VARIATIONS





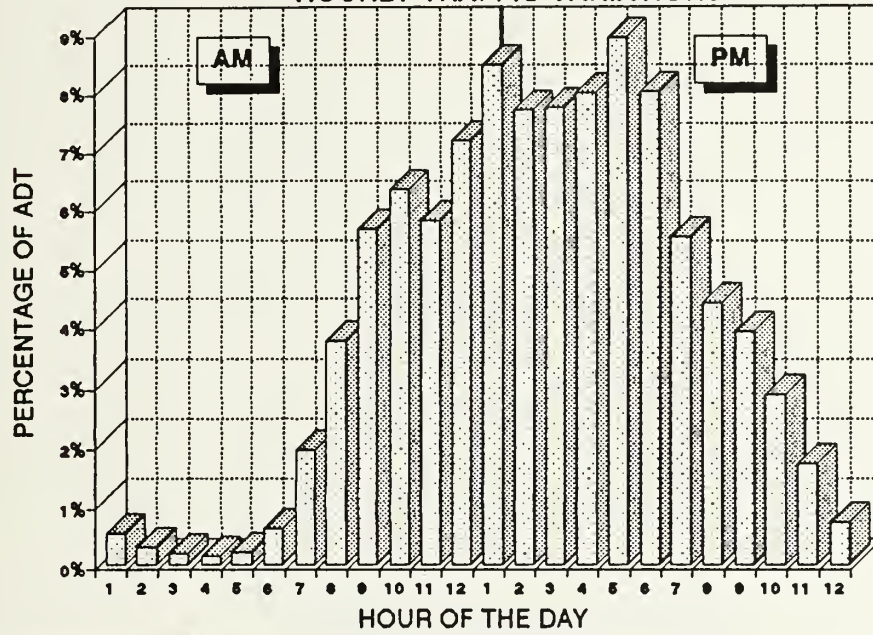


# US 93 NORTH OF HAMILTON HOURLY TRAFFIC VARIATIONS





# US 93 SOUTH OF ADIRONDAC HOURLY TRAFFIC VARIATIONS





## SECTION 3.

### SPOT SPEED DATA



# SPOT SPEED STUDY ANALYSIS

SITE NO.: 1

LOCATION:

NINTH STREET

DIRECTION:

BOTH

DATE: 5/7/91

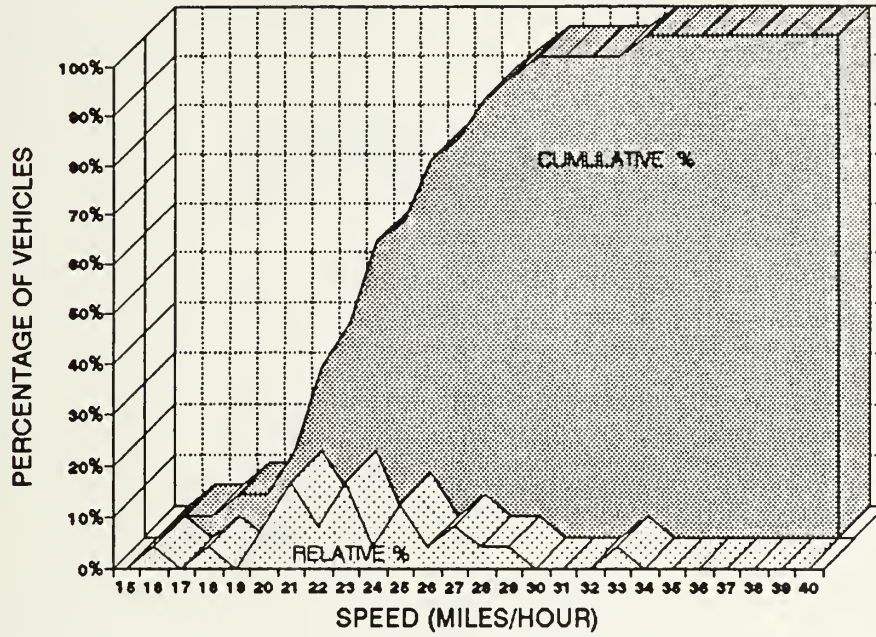
TIME: 2:30 - 3:00 PM

MID-VALUE SPOT SPEED	SPEED FREQ.	CUMUL. FREQ.	RELATIVE FREQ (%)	CULUMATIVE FREQ (%)
15	0	0	0.00%	0.00%
16	1	1	4.17%	4.17%
17	0	1	0.00%	4.17%
18	1	2	4.17%	8.33%
19	0	2	0.00%	8.33%
20	2	4	8.33%	16.67%
21	4	8	16.67%	33.33%
22	2	10	8.33%	41.67%
23	4	14	16.67%	58.33%
24	1	15	4.17%	62.50%
25	3	18	12.50%	75.00%
26	1	19	4.17%	79.17%
27	2	21	8.33%	87.50%
28	1	22	4.17%	91.67%
29	1	23	4.17%	95.83%
30	0	23	0.00%	95.83%
31	0	23	0.00%	95.83%
32	0	23	0.00%	95.83%
33	1	24	4.17%	100.00%
34	0	24	0.00%	100.00%
35	0	24	0.00%	100.00%
36	0	24	0.00%	100.00%
37	0	24	0.00%	100.00%
38	0	24	0.00%	100.00%
39	0	24	0.00%	100.00%
40	0	24	0.00%	100.00%
TOTAL VEHICLES =		24		
MEAN SPEED =		23.46	mph	
85TH PERCENTILE =		26.70	mph	
PACE SPEED =		18.5 - 28.5	mph	





MAIN STREET SCHOOL  
SPOT SPEED GRAPH - 9TH STREET





# SPOT SPEED STUDY ANALYSIS

SITE NO.: 2

LOCATION:

MAIN @ 9TH

DIRECTION:

BOTH

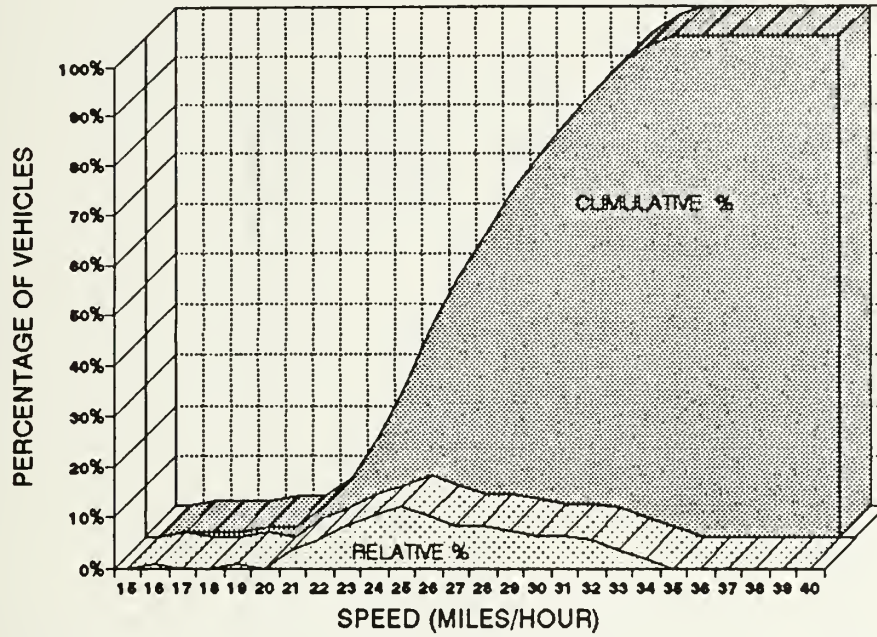
DATE: 5/7/91

TIME: 3:20 - 3:45 PM

MID-VALUE SPOT SPEED	SPEED FREQ.	CUMUL. FREQ.	RELATIVE FREQ (%)	CULUMATIVE FREQ (%)
15	0	0	0.00%	0.00%
16	1	1	0.93%	0.93%
17	0	1	0.00%	0.93%
18	0	1	0.00%	0.93%
19	1	2	0.93%	1.85%
20	0	2	0.00%	1.85%
21	4	6	3.70%	5.56%
22	6	12	5.56%	11.11%
23	9	21	8.33%	19.44%
24	11	32	10.19%	29.63%
25	13	45	12.04%	41.67%
26	11	56	10.19%	51.85%
27	9	65	8.33%	60.19%
28	9	74	8.33%	68.52%
29	8	82	7.41%	75.93%
30	7	89	6.48%	82.41%
31	7	96	6.48%	88.89%
32	6	102	5.56%	94.44%
33	4	106	3.70%	98.15%
34	2	108	1.85%	100.00%
35	0	108	0.00%	100.00%
36	0	108	0.00%	100.00%
37	0	108	0.00%	100.00%
38	0	108	0.00%	100.00%
39	0	108	0.00%	100.00%
40	0	108	0.00%	100.00%
TOTAL VEHICLES =		108		
MEAN SPEED =		26.66 mph		
85TH PERCENTILE =		30.40 mph		
PACE SPEED =		26.7 - 36.7 mph		



MAIN STREET SCHOOL  
SPOT SPEED GRAPH - MAIN @ 9TH





# SPOT SPEED STUDY ANALYSIS

SITE NO.: 3

LOCATION:

DALY AVENUE

DIRECTION:

BOTH

DATE: 5/8/91

TIME: 3:10 - 3:50 PM

MID-VALUE SPOT SPEED	SPEED FREQ.	CUMUL FREQ.	RELATIVE FREQ (%)	CULUMATIVE FREQ (%)
15	0	0	0.00%	0.00%
16	0	0	0.00%	0.00%
17	1	1	2.00%	2.00%
18	0	1	0.00%	2.00%
19	2	3	4.00%	6.00%
20	2	5	4.00%	10.00%
21	5	10	10.00%	20.00%
22	5	15	10.00%	30.00%
23	6	21	12.00%	42.00%
24	5	26	10.00%	52.00%
25	4	30	8.00%	60.00%
26	4	34	8.00%	68.00%
27	6	40	12.00%	80.00%
28	4	44	8.00%	88.00%
29	4	48	8.00%	96.00%
30	0	48	0.00%	96.00%
31	1	49	2.00%	98.00%
32	0	49	0.00%	98.00%
33	1	50	2.00%	100.00%
34	0	50	0.00%	100.00%
35	0	50	0.00%	100.00%
36	0	50	0.00%	100.00%
37	0	50	0.00%	100.00%
38	0	50	0.00%	100.00%
39	0	50	0.00%	100.00%
40	0	50	0.00%	100.00%
TOTAL VEHICLES =		50		
MEAN SPEED =		24.52	mph	
85TH PERCENTILE =		27.63	mph	
PACE SPEED =		19.5 - 29.5	mph	





## SECTION 4.

### CAPACITY ANALYSIS



# HCM: SIGNALIZED INTERSECTION SUMMARY

Marvin & Associates

Streets: (E-W) FIRST ST. (US 93)

(N-S) MAIN STREET

Analyst: R MARVIN

File Name: EXAMPLE.HC9

Area Type: CBD

6-25-91 PM PEAK

Comment: EXISTING SIGNAL CONTROL

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	<	1	2	<	1	2	<
Volumes	176	76	95	77	85	81	82	481	56	71	569	162
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vols			20			20			20			20

## Signal Operations

Phase combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru	*				Thru	*		
Right	*				Right	*		
Peds	*				Peds	*		
WB Left	*				SB Left	*		
Thru	*				Thru	*		
Right	*				Right	*		
Peds	*				Peds	*		
NB Right	*				EB Right	*		
SB Right	*				WB Right	*		
Green	20A				Green	32P		
Yellow/A-R	4				Yellow/A-R	4		
Lost Time	3.0				Lost Time	3.0		
Cycle Length: 60 secs Phase combination order: #1 #5								

## Intersection Performance Summary

	Lane	Group:	Adj Sat	v/c	g/c	Delay	LOS	Approach:	
								Delay	LOS
	Mvmts	Cap	Flow	Ratio	Ratio				
EB	L	1225	429	0.43	0.35	11.8	B	8.8	B
	T	1604	561	0.14	0.35	10.1	B		
	R	1190	1071	0.07	0.90	0.2	A		
WB	L	1212	424	0.19	0.35	10.4	B	10.8	B
	TR	1314	460	0.33	0.35	11.1	B		
NB	L	650	358	0.24	0.55	5.4	B	5.7	B
	TR	2967	1632	0.35	0.55	5.8	B		
SB	L	846	465	0.16	0.55	5.1	B	6.4	B
	TR	2906	1598	0.49	0.55	6.5	B		
Intersection Delay =			7.1 (sec/veh)	Intersection LOS = B					



# HCM: SIGNALIZED INTERSECTION SUMMARY

Marvin & Associates

Streets: (E-W) MAIN STREET

(N-S) SECOND STREET

Analyst: R MARVIN

File Name: EXAMPLE.HC9

Area Type: CBD

6-25-91 PM PEAK

Comment: EXISTING SIGNAL CONTROL

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	> 1	<		> 1	<		> 1	<		> 1	<	
Volumes	25	360	28	55	210	39	25	60	15	60	30	50
Lane Width	15.0			15.0			15.0			15.0		
RTOR Vols			5			5			5			5

## Signal Operations

Phase combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru	*				Thru	*		
Right	*				Right	*		
Peds	*				Peds	*		
WB Left	*				SB Left	*		
Thru	*				Thru	*		
Right	*				Right	*		
Peds	*				Peds	*		
NB Right	*				EB Right	*		
SB Right	*				WB Right	*		
Green	30P				Green	30P		
Yellow/A-R	4				Yellow/A-R	4		
Lost Time	3.0				Lost Time	3.0		
Cycle Length: 68 secs Phase combination order: #1 #5								

## Intersection Performance Summary

	Lane Group:	Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/c Ratio	Delay	LOS	Approach:	
									Delay	LOS
EB	LTR	1257		573	0.75	0.46	15.4	C	15.4	C
WB	LTR	1031		470	0.67	0.46	13.6	B	13.6	B
NB	LTR	1226		559	0.18	0.46	8.3	B	8.3	B
SB	LTR	1117		509	0.28	0.46	8.9	B	8.9	B
Intersection Delay =				13.1 (sec/veh)		Intersection LOS = B				



# HCM: SIGNALIZED INTERSECTION SUMMARY

Marvin & Associates

Streets: (E-W) FIRST ST. (US 93) (N-S) GOLF COURSE ROAD  
 Analyst: R MARVIN File Name: EXAMPLE.HC9  
 Area Type: Other 6-25-91 PM PEAK  
 Comment: EXISTING SIGNAL CONTROL

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	> 1	<		> 1	<		> 2	<		> 2	<	
Volumes	12	17	5	45	16	95	16	305	13	251	450	25
Lane Width	12.0			12.0			12.0			12.0		
RTOR Vols			2			20			5			5

## Signal Operations

Phase combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru	*				Thru	*		
Right	*				Right	*		
Peds	*				Peds	*		
WB Left	*				SB Left	*		
Thru	*				Thru	*		
Right	*				Right	*		
Peds	*				Peds	*		
NB Right	*				EB Right	*		
SB Right	*				WB Right	*		
Green	20A				Green	32P		
Yellow/A-R	4				Yellow/A-R	4		
Lost Time	3.0				Lost Time	3.0		
Cycle Length: 60 secs Phase combination order: #1 #5								

## Intersection Performance Summary

	Lane Group:	Adj Sat	v/c	g/c			Approach:		
	Mvmnts Cap	Flow	Ratio	Ratio	Delay	LOS	Delay	LOS	
EB	LTR	1537	538	0.06	0.35	9.9	B	9.9	B
WB	LTR	1467	513	0.28	0.35	10.8	B	10.8	B
NB	LTR	2974	1636	0.22	0.55	5.3	B	5.3	B
SB	LTR	2809	1545	0.52	0.55	6.7	B	6.7	B
Intersection Delay =		6.8 (sec/veh)			Intersection LOS = B				





# HCM: SIGNALIZED INTERSECTION SUMMARY

Marvin & Associates

Streets: (E-W) FIRST ST. (US 93) (N-S) ADIRONDAC ST  
 Analyst: R MARVIN File Name: EXAMPLE.HC9  
 Area Type: Other 6-25-91 PM PEAK  
 Comment: EXISTING SIGNAL CONTROL

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	> 1	<		> 1	<		> 2	<		> 2	<	
Volumes	48	20	25	60	20	36	50	750	110	50	530	55
Lane Width	12.0			12.0			12.0			12.0		
RTOR Vols			20			20			20			20

## Signal Operations

Phase combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru	*				Thru	*		
Right	*				Right	*		
Peds	*				Peds	*		
WB Left	*				SB Left	*		
Thru	*				Thru	*		
Right	*				Right	*		
Peds	*				Peds	*		
NB Right	*				EB Right	*		
SB Right	*				WB Right	*		
Green	20A				Green	32P		
Yellow/A-R	4				Yellow/A-R	4		
Lost Time	3.0				Lost Time	3.0		
Cycle Length: 60 secs Phase combination order: #1 #5								

## Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/c	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	LTR	1340	469	0.16	0.35	10.2	B	10.2	B
WB	LTR	1349	472	0.21	0.35	10.4	B	10.4	B
NB	LTR	3021	1662	0.59	0.55	7.3	B	7.3	B
SB	LTR	2542	1398	0.49	0.55	6.5	B	6.5	B
Intersection Delay =		7.3	(sec/veh)		Intersection LOS = B				



# 3RD & MAIN HAMILTON

## ALL-WAY STOP-CONTROLLED INTERSECTIONS--Level of Service Analysis

### Instructions:

Enter the turning movement volumes, the peak hour factor, and the number of lanes on each approach. The capacity, delay, and level of service are calculated below. Please note validity range checks.

Check columns F through J (rows 1-50) for detailed calculations.

	Eastbound	Westbound	Northbound	Southbound
Left-Turn Volume	6	53	14	67
Through Volume	259	182	37	33
Right-Turn Volume	29	53	48	29
Peak-Hour Factor	0.90	0.90	0.90	0.90
Number of Lanes	1	1	1	1
Capacity, vph	688	718	235	411
Volume/Capacity Ratio	0.47	0.45	0.47	0.35
Delay, sec/veh	6	5	6	4
Level of Service	B	B	B	A
Range Check	Error	Error	Error	Error



## ADJUSTMENT FACTORS

Page-2

---

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
	-----	-----	-----	-----
EASTBOUND	0.00	90	20	N
WESTBOUND	-----	---	---	-
NORTHBOUND	0.00	90	20	N
SOUTHBOUND	0.00	90	20	N

## VEHICLE COMPOSITION

---

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
	-----	-----	-----
EASTBOUND	2	0	2
WESTBOUND	---	---	---
NORTHBOUND	4	2	2
SOUTHBOUND	4	2	2

## CRITICAL GAPS

---

	TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
	-----	-----	-----	-----
MINOR RIGHTS				
EB	5.50	5.50	0.00	5.50
MAJOR LEFTS				
NB	5.50	5.50	0.00	5.50
MINOR LEFTS				
EB	7.00	7.00	0.00	7.00

## IDENTIFYING INFORMATION

---

NAME OF THE EAST/WEST STREET..... PINE STREET  
 NAME OF THE NORTH/SOUTH STREET.... FIRST STREET  
 DATE AND TIME OF THE ANALYSIS..... 07-01-1991 ; PEAK PM HOUR  
 OTHER INFORMATION.... EXISTING



MOVEMENT	FLOW- RATE v(pcph)	POTEN- TIAL CAPACITY c (pcph) p	ACTUAL MOVEMENT CAPACITY c (pcph) M	SHARED CAPACITY c (pcph) SH	RESERVE CAPACITY c = c - v R SH	LOS
----------	--------------------------	---	---	--------------------------------------	--	-----

## MINOR STREET

EB LEFT	51	113	108	>	108	>	57	>	E
				>	189	>	87	>	E
RIGHT	51	759	759	>	759	>	708	>	A

## MAJOR STREET

NB LEFT	33	510	510		510		477		A
---------	----	-----	-----	--	-----	--	-----	--	---

## IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... PINE STREET  
 NAME OF THE NORTH/SOUTH STREET.... FIRST STREET  
 DATE AND TIME OF THE ANALYSIS..... 07-01-1991 ; PEAK PM HOUR  
 OTHER INFORMATION.... EXISTING





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## IDENTIFYING INFORMATION

-----

AVERAGE RUNNING SPEED, MAJOR STREET.. 30

PEAK HOUR FACTOR..... .9

AREA POPULATION..... 10000

NAME OF THE EAST/WEST STREET..... PINCKNEY

NAME OF THE NORTH/SOUTH STREET..... FIRST STREET

NAME OF THE ANALYST..... R MARVIN

DATE OF THE ANALYSIS (mm/dd/yy)..... 07-01-1991

TIME PERIOD ANALYZED..... PEAK PM HOUR

OTHER INFORMATION.... EXISTING

## INTERSECTION TYPE AND CONTROL

-----

INTERSECTION TYPE: T-INTERSECTION

MAJOR STREET DIRECTION: NORTH/SOUTH

CONTROL TYPE EASTBOUND: STOP SIGN

## TRAFFIC VOLUMES

-----

	EB	WB	NB	SB
	----	----	----	----
LEFT	47	--	30	0
THRU	0	--	550	561
RIGHT	66	--	0	24

## NUMBER OF LANES

-----

	EB	WB	NB	SB
	----	----	----	----
LANES	1	--	2	2



## ADJUSTMENT FACTORS

Page-2

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	20	N
WESTBOUND	-----	---	---	-
NORTHBOUND	0.00	90	20	N
SOUTHBOUND	0.00	90	20	N

## VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	2	0	2
WESTBOUND	---	---	---
NORTHBOUND	4	2	2
SOUTHBOUND	4	2	2

## CRITICAL GAPS

	TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS				
EB	5.50	5.50	0.00	5.50
MAJOR LEFTS				
NB	5.50	5.50	0.00	5.50
MINOR LEFTS				
EB	7.00	7.00	0.00	7.00

## IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... PINCKNEY  
NAME OF THE NORTH/SOUTH STREET.... FIRST STREET  
DATE AND TIME OF THE ANALYSIS..... 07-01-1991 ; PEAK PM HOUR  
OTHER INFORMATION.... EXISTING



MOVEMENT	FLOW- RATE v(pcph)	POTEN- TIAL CAPACITY c (pcph) p	ACTUAL MOVEMENT CAPACITY c (pcph) M	SHARED CAPACITY c (pcph) SH	RESERVE CAPACITY c = c - v R SH	LOS
----------	--------------------------	---	---	--------------------------------------	--	-----

## MINOR STREET

EB LEFT	52	126	121	>	121	>	69	>	E
				>	238	>	112	>	D
RIGHT	73	768	768	>	768	>	694	>	A

## MAJOR STREET

NB LEFT	34	522	522		522		488		A
---------	----	-----	-----	--	-----	--	-----	--	---

## IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... PINCKNEY  
 NAME OF THE NORTH/SOUTH STREET.... FIRST STREET  
 DATE AND TIME OF THE ANALYSIS..... 07-01-1991 ; PEAK PM HOUR  
 OTHER INFORMATION.... EXISTING



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## IDENTIFYING INFORMATION

-----

AVERAGE RUNNING SPEED, MAJOR STREET.. 30

PEAK HOUR FACTOR..... .9

AREA POPULATION..... 10000

NAME OF THE EAST/WEST STREET..... STATE

NAME OF THE NORTH/SOUTH STREET..... FIRST STREET

NAME OF THE ANALYST..... R MARVIN

DATE OF THE ANALYSIS (mm/dd/yy)..... 07-01-1991

TIME PERIOD ANALYZED..... PEAK PM HOUR

OTHER INFORMATION.... EXISTING

## INTERSECTION TYPE AND CONTROL

-----

INTERSECTION TYPE: T-INTERSECTION

MAJOR STREET DIRECTION: NORTH/SOUTH

CONTROL TYPE EASTBOUND: STOP SIGN

## TRAFFIC VOLUMES

-----

	EB	WB	NB	SB
	----	----	----	----
LEFT	67	--	53	100
THRU	0	--	523	523
RIGHT	102	--	0	53

## NUMBER OF LANES

-----

	EB	WB	NB	SB
	----	----	----	----
LANES	1	--	2	2





## ADJUSTMENT FACTORS

Page-2

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	20	N
WESTBOUND	-----	---	---	-
NORTHBOUND	0.00	90	20	N
SOUTHBOUND	0.00	90	20	N

## VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	2	0	2
WESTBOUND	---	---	---
NORTHBOUND	4	2	2
SOUTHBOUND	4	2	2

## CRITICAL GAPS

	TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS				
EB	5.50	5.50	0.00	5.50
MAJOR LEFTS				
NB	5.50	5.50	0.00	5.50
MINOR LEFTS				
EB	7.00	7.00	0.00	7.00

## IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... STATE  
NAME OF THE NORTH/SOUTH STREET.... FIRST STREET  
DATE AND TIME OF THE ANALYSIS..... 07-01-1991 ; PEAK PM HOUR  
OTHER INFORMATION.... EXISTING



## CAPACITY AND LEVEL-OF-SERVICE

Page-3

MOVEMENT	FLOW- RATE v (pcph)	POTEN- TIAL CAPACITY c (pcph) p	ACTUAL MOVEMENT CAPACITY c (pcph) M	SHARED CAPACITY c (pcph) SH	RESERVE CAPACITY c = c - v R SH	LOS
----------	---------------------------	---	---	--------------------------------------	--	-----

## MINOR STREET

EB LEFT	74	131	122	>	122	>	47	>	E
				>	248	>	60	>	E
RIGHT	113	772	772	>	772	>	659	>	A

## MAJOR STREET

NB LEFT	61	529	529		529		468		A
---------	----	-----	-----	--	-----	--	-----	--	---

## IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... STATE

NAME OF THE NORTH/SOUTH STREET.... FIRST STREET

DATE AND TIME OF THE ANALYSIS..... 07-01-1991 ; PEAK PM HOUR

OTHER INFORMATION.... EXISTING



## 1985 HCM: UNSIGNALIZED INTERSECTIONS

Page-1

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## IDENTIFYING INFORMATION

-----

AVERAGE RUNNING SPEED, MAJOR STREET.. 30

PEAK HOUR FACTOR..... .9

AREA POPULATION..... 10000

NAME OF THE EAST/WEST STREET..... BEDFORD

NAME OF THE NORTH/SOUTH STREET..... FIRST STREET

NAME OF THE ANALYST..... R MARVIN

DATE OF THE ANALYSIS (mm/dd/yy)..... 07-01-1991

TIME PERIOD ANALYZED..... PEAK PM HOUR

OTHER INFORMATION.... EXISTING

## INTERSECTION TYPE AND CONTROL

-----

INTERSECTION TYPE: T-INTERSECTION

MAJOR STREET DIRECTION: NORTH/SOUTH

CONTROL TYPE EASTBOUND: STOP SIGN

## TRAFFIC VOLUMES

-----

	EB	WB	NB	SB
	----	----	----	----
LEFT	14	--	6	100
THRU	0	--	593	598
RIGHT	24	--	0	14

## NUMBER OF LANES

-----

	EB	WB	NB	SB
	----	----	----	----
LANES	1	--	2	2



## ADJUSTMENT FACTORS

Page-2

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	20	N
WESTBOUND	-----	---	---	-
NORTHBOUND	0.00	90	20	N
SOUTHBOUND	0.00	90	20	N

## VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	2	0	2
WESTBOUND	---	---	---
NORTHBOUND	4	2	2
SOUTHBOUND	4	2	2

## CRITICAL GAPS

	TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS				
EB	5.50	5.50	0.00	5.50
MAJOR LEFTS				
NB	5.50	5.50	0.00	5.50
MINOR LEFTS				
EB	7.00	7.00	0.00	7.00

## IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... BEDFORD  
NAME OF THE NORTH/SOUTH STREET.... FIRST STREET  
DATE AND TIME OF THE ANALYSIS..... 07-01-1991 ; PEAK PM HOUR  
OTHER INFORMATION.... EXISTING





## CAPACITY AND LEVEL-OF-SERVICE

Page-3

MOVEMENT	FLOW-RATE v (pcph)	POTENTIAL CAPACITY c (pcph) p	ACTUAL MOVEMENT CAPACITY c (pcph) M	SHARED CAPACITY c (pcph) SH	RESERVE CAPACITY c = c - v R SH	LOS
----------	-----------------------	--	---	--------------------------------------	--	-----

## MINOR STREET

EB LEFT	16	116	115	>	115	>	99	>	E
				>	247	>	205	>	C
RIGHT	27	754	754	>	754	>	727	>	A

## MAJOR STREET

NB LEFT	7	503	503		503		496		A
---------	---	-----	-----	--	-----	--	-----	--	---

## IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... BEDFORD  
NAME OF THE NORTH/SOUTH STREET.... FIRST STREET  
DATE AND TIME OF THE ANALYSIS..... 07-01-1991 ; PEAK PM HOUR  
OTHER INFORMATION.... EXISTING



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## IDENTIFYING INFORMATION

-----

AVERAGE RUNNING SPEED, MAJOR STREET.. 30

PEAK HOUR FACTOR..... .9

AREA POPULATION..... 10000

NAME OF THE EAST/WEST STREET..... MAIN STREET

NAME OF THE NORTH/SOUTH STREET..... FOURTH STREET

NAME OF THE ANALYST..... R MARVIN

DATE OF THE ANALYSIS (mm/dd/yy)..... 07-01-1991

TIME PERIOD ANALYZED..... PEAK PM HOUR

OTHER INFORMATION.... EXISTING

## INTERSECTION TYPE AND CONTROL

-----

INTERSECTION TYPE: 4-LEG

MAJOR STREET DIRECTION: EAST/WEST

CONTROL TYPE NORTHBOUND: STOP SIGN

CONTROL TYPE SOUTHBOUND: STOP SIGN

## TRAFFIC VOLUMES

-----

	EB	WB	NB	SB
	----	----	----	----
LEFT	13	36	18	37
THRU	151	138	25	24
RIGHT	6	94	21	33

## NUMBER OF LANES AND LANE USAGE

-----

	EB	WB	NB	SB
	----	----	----	----
LANES	1	1	1	1
LANE USAGE			LTR	LTR



	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	20	N
WESTBOUND	0.00	90	20	N
NORTHBOUND	0.00	90	20	N
SOUTHBOUND	0.00	90	20	N

## VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	4	1	2
WESTBOUND	4	1	2
NORTHBOUND	1	0	2
SOUTHBOUND	1	0	2

## CRITICAL GAPS

	TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS				
NB	5.50	5.50	0.00	5.50
SB	5.50	5.50	0.00	5.50
MAJOR LEFTS				
EB	5.00	5.00	0.00	5.00
WB	5.00	5.00	0.00	5.00
MINOR THROUGHES				
NB	6.00	6.00	0.00	6.00
SB	6.00	6.00	0.00	6.00
MINOR LEFTS				
NB	6.50	6.50	0.00	6.50
SB	6.50	6.50	0.00	6.50

## IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... MAIN STREET  
NAME OF THE NORTH/SOUTH STREET.... FOURTH STREET  
DATE AND TIME OF THE ANALYSIS..... 07-01-1991 ; PEAK PM HOUR  
OTHER INFORMATION.... EXISTING



MOVEMENT	FLOW- RATE v (pcph)	POTEN- TIAL CAPACITY c (pcph) P	ACTUAL MOVEMENT CAPACITY c (pcph) M	SHARED CAPACITY c (pcph) SH	RESERVE CAPACITY c = c - v R SH	LOS
-----						
MINOR STREET						
NB LEFT	20	461	423	>	423	> 403 > A
THROUGH	28	562	543	>	574 543	> 503 515 > A A
RIGHT	23	920	920	>	920	> 897 > A
MINOR STREET						
SB LEFT	41	502	464	>	464	> 423 > A
THROUGH	27	596	576	>	592 576	> 488 549 > A A
RIGHT	36	884	884	>	884	> 848 > A
MAJOR STREET						
EB LEFT	15	930	930		930	915 A
WB LEFT	41	989	989		989	948 A

## IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... MAIN STREET  
NAME OF THE NORTH/SOUTH STREET.... FOURTH STREET  
DATE AND TIME OF THE ANALYSIS..... 07-01-1991 ; PEAK PM HOUR  
OTHER INFORMATION.... EXISTING





\*\*\*\*\*

## IDENTIFYING INFORMATION

-----

AVERAGE RUNNING SPEED, MAJOR STREET.. 30

PEAK HOUR FACTOR..... .9

AREA POPULATION..... 10000

NAME OF THE EAST/WEST STREET..... MAIN STREET

NAME OF THE NORTH/SOUTH STREET..... TENTH STREET

NAME OF THE ANALYST..... R MARVIN

DATE OF THE ANALYSIS (mm/dd/yy)..... 07-01-1991

TIME PERIOD ANALYZED..... PEAK PM HOUR

OTHER INFORMATION.... EXISTING

## INTERSECTION TYPE AND CONTROL

-----

INTERSECTION TYPE: T-INTERSECTION

MAJOR STREET DIRECTION: EAST/WEST

CONTROL TYPE SOUTHBOUND: STOP SIGN

## TRAFFIC VOLUMES

-----

	EB	WB	NB	SB
	----	----	----	----
LEFT	6	36	--	67
THRU	125	158	--	24
RIGHT	6	47	--	26

## NUMBER OF LANES

-----

	EB	WB	NB	SB
	----	----	----	----
LANES	1	1	--	1



## ADJUSTMENT FACTORS

Page-2

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	20	N
WESTBOUND	0.00	90	20	N
NORTHBOUND	-----	---	---	-
SOUTHBOUND	0.00	90	20	N

## VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	4	1	2
WESTBOUND	4	1	2
NORTHBOUND	---	---	---
SOUTHBOUND	1	0	2

## CRITICAL GAPS

	TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS				
SB	5.50	5.50	0.00	5.50
MAJOR LEFTS				
EB	5.00	5.00	0.00	5.00
MINOR LEFTS				
SB	6.50	6.50	0.00	6.50

## IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... MAIN STREET  
 NAME OF THE NORTH/SOUTH STREET.... TENTH STREET  
 DATE AND TIME OF THE ANALYSIS..... 07-01-1991 ; PEAK PM HOUR  
 OTHER INFORMATION..... EXISTING



MOVEMENT	FLOW-RATE v(pcph)	POTENTIAL CAPACITY c (pcph) p	ACTUAL MOVEMENT CAPACITY c (pcph) M	SHARED CAPACITY c (pcph) SH	RESERVE CAPACITY c = c - v R SH	LOS
----------	----------------------	--	---	--------------------------------------	--	-----

## MINOR STREET

SB LEFT	74	600	597	>	597	>	523	>	A
				>	657	>	554	>	A
RIGHT	29	888	888	>	888	>	860	>	A

## MAJOR STREET

EB LEFT	7	959	959		959		952		A
---------	---	-----	-----	--	-----	--	-----	--	---

## IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... MAIN STREET  
 NAME OF THE NORTH/SOUTH STREET.... TENTH STREET  
 DATE AND TIME OF THE ANALYSIS..... 07-01-1991 ; PEAK PM HOUR  
 OTHER INFORMATION.... EXISTING



SECTION 5.

TRAFFIC SIGNAL  
WARRANT ANALYSIS





WARRANT #8 - COMBINATION OF WARRANTS				
80 % OF WARRANTS #1 & #2	REQUIRED		EXISTS	
	MAJOR	MINOR	MAJOR	MINOR
WARRANT #1	400	120	605	116
WARRANT #2	600	60	605	116
% OF WARRANT MET			126%	145%

WARRANT #9 - FOUR HOUR VOLUMES				
	MAJOR	MINOR	CURVE NO.	WARRANT
4TH HIGHEST HOUR	709	140	FIGURE	YES
NUMBER OF LANES	1	1	4.8	NO

WARRANT #10 - PEAK HOUR DELAY				
PEAK HOUR:	MINOR LEG		TOTAL ENTERING	
	DELAY	VOLUME	4 LEGS	3 LEGS
REQUIRED VALUES	4	100	800	650
EXISTING VALUES	3	145	1037	

WARRANT #11 - PEAK HOUR VOLUME				
	MAJOR	MINOR	CURVE NO.	WARRANT
PEAK HOUR	756	145	FIGURE	YES
NUMBER OF LANES	2	1	4.5	NO

SUMMARY OF WARRANTS SATISFIED					
WARRANT 1		WARRANT 5		WARRANT 9	X
WARRANT 2		WARRANT 6		WARRANT 10	
WARRANT 3	X	WARRANT 7		WARRANT 11	X
WARRANT 4		WARRANT 8	X	TOTAL =	4



<p align="center"><b>TRAFFIC SIGNAL WARRANT ANALYSIS</b>  <b>YEAR 1991</b>  <b>THIRD STREET &amp; MAIN STREET</b></p>
---

WARRANT #1 - MINIMUM VEHICULAR VOLUME					
70% WARRANT		REQUIRED		EXISTS	
YES	NO	MAJOR	MINOR	MAJOR	MINOR
8TH HIGHEST HOUR		500	150	370	90
% OF WARRANT MET				74%	60%

WARRANT #2 - INTERRUPTION OF CONTINUOUS TRAFFIC					
70% WARRANT		REQUIRED		EXISTS	
YES	NO	MAJOR	MINOR	MAJOR	MINOR
8TH HIGHEST HOUR		750	75	370	90
% OF WARRANT MET				49%	120%

WARRANT #3 - MINIMUM PEDESTRIAN TRAFFIC					
50% WARRANT		REQUIRED		EXISTS	
YES	NO	PEDS	GAPS	PEDS	GAPS
FOUR HOURS		50	60	63	THEORY
PEAK HOUR		95	60	75	52
% OF WARRANT MET				126%	115%

WARRANT #4 - SCHOOL CROSSING [STUD	YES	NO
------------------------------------	-----	----

WARRANT #5 - PROGRESSIVE MOVEMENT	YES	NO
-----------------------------------	-----	----

WARRANT #6 - ACCIDENT EXPERIENCE	YES	NO
----------------------------------	-----	----

WARRANT #7 - SYSTEMS WARRANT	YES	NO
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WARRANT #8 - COMBINATION OF WARRANTS				
80 % OF WARRANTS #1 & #2	REQUIRED		EXISTS	
	MAJOR	MINOR	MAJOR	MINOR
WARRANT #1	400	120	370	90
WARRANT #2	600	60	370	90
% OF WARRANT MET			77%	113%

WARRANT #9 - FOUR HOUR VOLUMES				
	MAJOR	MINOR	CURVE NO.	WARRANT
4TH HIGHEST HOUR	709	140	FIGURE	YES
NUMBER OF LANES	1	1	4.8	NO

WARRANT #10 - PEAK HOUR DELAY				
PEAK HOUR:	MINOR LEG		TOTAL ENTERING	
	DELAY	VOLUME	4 LEGS	3 LEGS
REQUIRED VALUES	4	100	800	650
EXISTING VALUES	0.5	130	680	

WARRANT #11 - PEAK HOUR VOLUME				
	MAJOR	MINOR	CURVE NO.	WARRANT
PEAK HOUR	462	130	FIGURE	YES
NUMBER OF LANES	2	1	4.6	NO

SUMMARY OF WARRANTS SATISFIED					
WARRANT 1		WARRANT 5		WARRANT 9	
WARRANT 2		WARRANT 6		WARRANT 10	
WARRANT 3	X	WARRANT 7		WARRANT 11	
WARRANT 4		WARRANT 8		TOTAL =	1



**TRAFFIC SIGNAL WARRANT ANALYSIS**  
**YEAR 1991**  
**FIRST ST (US 93) & PINCKNEY ST**

WARRANT #1 - MINIMUM VEHICULAR VOLUME					
70% WARRANT		REQUIRED		EXISTS	
YES	NO	MAJOR	MINOR	MAJOR	MINOR
		600	150	874	85
% OF WARRANT MET				146%	57%

WARRANT #2 - INTERRUPTION OF CONTINUOUS TRAFFIC					
70% WARRANT		REQUIRED		EXISTS	
YES	NO	MAJOR	MINOR	MAJOR	MINOR
		900	75	874	85
% OF WARRANT MET				97%	113%

WARRANT #3 - MINIMUM PEDESTRIAN TRAFFIC					
50% WARRANT		REQUIRED		EXISTS	
YES	NO	PEDS	GAPS	PEDS	GAPS
		50	60	10	THEORY
		95	60	16	35
% OF WARRANT MET				20%	171%

WARRANT #4 - SCHOOL CROSSING [STUD	YES	NO
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WARRANT #5 - PROGRESSIVE MOVEMENT	YES	NO
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WARRANT #6 - ACCIDENT EXPERIENCE	YES	NO
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WARRANT #7 - SYSTEMS WARRANT	YES	NO
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WARRANT #8 - COMBINATION OF WARRANTS				
80 % OF WARRANTS #1 & #2	REQUIRED		EXISTS	
	MAJOR	MINOR	MAJOR	MINOR
WARRANT #1	480	120	874	85
WARRANT #2	720	60	874	85
% OF WARRANT MET			152%	106%

WARRANT #9 - FOUR HOUR VOLUMES				
	MAJOR	MINOR	CURVE NO.	WARRANT
4TH HIGHEST HOUR	1130	109	FIGURE	YES
NUMBER OF LANES	1	1	4.8	NO

WARRANT #10 - PEAK HOUR DELAY				
PEAK HOUR:	MINOR LEG		TOTAL ENTERING	
	DELAY	VOLUME	4 LEGS	3 LEGS
REQUIRED VALUES	4	100	800	650
EXISTING VALUES	1.5	115		1265

WARRANT #11 - PEAK HOUR VOLUME				
	MAJOR	MINOR	CURVE NO.	WARRANT
PEAK HOUR	756	145	FIGURE	YES
NUMBER OF LANES	2	1	4.6	NO

SUMMARY OF WARRANTS SATISFIED					
WARRANT 1		WARRANT 5		WARRANT 9	X
WARRANT 2		WARRANT 6		WARRANT 10	
WARRANT 3		WARRANT 7		WARRANT 11	X
WARRANT 4		WARRANT 8	X	TOTAL =	3



**TRAFFIC SIGNAL WARRANT ANALYSIS**  
**YEAR 1991**  
**PINE STREET & FIRST STREET**

WARRANT #1 - MINIMUM VEHICULAR VOLUME					
70% WARRANT		REQUIRED		EXISTS	
YES	NO	MAJOR	MINOR	MAJOR	MINOR
		600	150	899	55
8TH HIGHEST HOUR					
% OF WARRANT MET				150%	37%

WARRANT #2 - INTERRUPTION OF CONTINUOUS TRAFFIC					
70% WARRANT		REQUIRED		EXISTS	
YES	NO	MAJOR	MINOR	MAJOR	MINOR
		900	75	899	55
8TH HIGHEST HOUR					
% OF WARRANT MET				100%	73%

WARRANT #3 - MINIMUM PEDESTRIAN TRAFFIC					
50% WARRANT		REQUIRED		EXISTS	
YES	NO	PEDS	GAPS	PEDS	GAPS
		50	60	2	THEORY
FOUR HOURS					
PEAK HOUR		95	60	3	6
% OF WARRANT MET				4%	1000%

WARRANT #4 - SCHOOL CROSSING [STUD	YES	NO
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WARRANT #5 - PROGRESSIVE MOVEMENT	YES	NO
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WARRANT #6 - ACCIDENT EXPERIENCE	YES	NO
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WARRANT #7 - SYSTEMS WARRANT	YES	NO
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WARRANT #8 - COMBINATION OF WARRANTS				
80 % OF WARRANTS #1 & #2	REQUIRED		EXISTS	
	MAJOR	MINOR	MAJOR	MINOR
WARRANT #1	480	120	899	55
WARRANT #2	720	60	899	55
% OF WARRANT MET			156%	69%

WARRANT #9 - FOUR HOUR VOLUMES				
	MAJOR	MINOR	CURVE NO.	WARRANT
4TH HIGHEST HOUR	1130	70	FIGURE	YES
NUMBER OF LANES	1	1	4.8	NO

WARRANT #10 - PEAK HOUR DELAY				
PEAK HOUR:	MINOR LEG		TOTAL ENTERING	
	DELAY	VOLUME	4 LEGS	3 LEGS
REQUIRED VALUES	4	100	800	650
EXISTING VALUES	0.2	87		1360

WARRANT #11 - PEAK HOUR VOLUME				
	MAJOR	MINOR	CURVE NO.	WARRANT
PEAK HOUR	1270	87	FIGURE	YES
NUMBER OF LANES	2	1	4.6	NO

SUMMARY OF WARRANTS SATISFIED					
WARRANT 1		WARRANT 5		WARRANT 9	X
WARRANT 2		WARRANT 6		WARRANT 10	
WARRANT 3		WARRANT 7		WARRANT 11	X
WARRANT 4		WARRANT 8		TOTAL =	2



**TRAFFIC SIGNAL WARRANT ANALYSIS**  
**YEAR 1991**  
**STATE STREET & FIRST STREET**

WARRANT #1 - MINIMUM VEHICULAR VOLUME					
70% WARRANT		REQUIRED		EXISTS	
YES	NO	MAJOR	MINOR	MAJOR	MINOR
		600	150	824	108
8TH HIGHEST HOUR					
% OF WARRANT MET				137%	72%

WARRANT #2 - INTERRUPTION OF CONTINUOUS TRAFFIC					
70% WARRANT		REQUIRED		EXISTS	
YES	NO	MAJOR	MINOR	MAJOR	MINOR
		900	75	824	108
8TH HIGHEST HOUR					
% OF WARRANT MET				92%	144%

WARRANT #3 - MINIMUM PEDESTRIAN TRAFFIC					
50% WARRANT		REQUIRED		EXISTS	
YES	NO	PEDS	GAPS	PEDS	GAPS
		50	60	7	THEORY
FOUR HOURS					
PEAK HOUR		95	60	10	10
% OF WARRANT MET				14%	600%

WARRANT #4 - SCHOOL CROSSING [STUD YES NO

WARRANT #5 - PROGRESSIVE MOVEMENT YES NO

WARRANT #6 - ACCIDENT EXPERIENCE YES NO

WARRANT #7 - SYSTEMS WARRANT YES NO





WARRANT #8 - COMBINATION OF WARRANTS				
80 % OF WARRANTS #1 & #2	REQUIRED		EXISTS	
	MAJOR	MINOR	MAJOR	MINOR
WARRANT #1	480	120	824	108
WARRANT #2	720	60	824	108
% OF WARRANT MET			143%	135%

WARRANT #9 - FOUR HOUR VOLUMES				
	MAJOR	MINOR	CURVE NO.	WARRANT
4TH HIGHEST HOUR	1030	136	FIGURE	YES
NUMBER OF LANES	1	1	4.8	NO

WARRANT #10 - PEAK HOUR DELAY				
PEAK HOUR:	MINOR LEG		TOTAL ENTERING	
	DELAY	VOLUME	4 LEGS	3 LEGS
REQUIRED VALUES	4	100	800	650
EXISTING VALUES	1.7	189	2600	

WARRANT #11 - PEAK HOUR VOLUME				
	MAJOR	MINOR	CURVE NO.	WARRANT
PEAK HOUR	1170	189	FIGURE	YES
NUMBER OF LANES	2	1	4.6	NO

SUMMARY OF WARRANTS SATISFIED					
WARRANT 1		WARRANT 5		WARRANT 9	X
WARRANT 2		WARRANT 6		WARRANT 10	
WARRANT 3		WARRANT 7		WARRANT 11	
WARRANT 4		WARRANT 8	X	TOTAL =	2



**TRAFFIC SIGNAL WARRANT ANALYSIS**  
**YEAR 1991**  
**RIVER CUTOFF RD & US 93**

**WARRANT #1 - MINIMUM VEHICULAR VOLUME**

70% WARRANT	REQUIRED		EXISTS	
YES <b>NO</b>	MAJOR	MINOR	MAJOR	MINOR
8TH HIGHEST HOUR	600	150	490	35
% OF WARRANT MET			82%	23%

**WARRANT #2 - INTERRUPTION OF CONTINUOUS TRAFFIC**

70% WARRANT	REQUIRED		EXISTS	
YES <b>NO</b>	MAJOR	MINOR	MAJOR	MINOR
8TH HIGHEST HOUR	900	75	490	35
% OF WARRANT MET			54%	47%

**WARRANT #3 - MINIMUM PEDESTRIAN TRAFFIC**

50% WARRANT	REQUIRED		EXISTS	
YES <b>NO</b>	PEDS	GAPS	PEDS	GAPS
FOUR HOURS	50	60	1	THEORY
PEAK HOUR	95	60	2	70
% OF WARRANT MET			2%	86%

**WARRANT #4 - SCHOOL CROSSING** [STUD YES **NO**

**WARRANT #5 - PROGRESSIVE MOVEMENT** YES **NO**

**WARRANT #6 - ACCIDENT EXPERIENCE** YES **NO**

**WARRANT #7 - SYSTEMS WARRANT** YES **NO**



WARRANT #8 - COMBINATION OF WARRANTS				
80 % OF WARRANTS #1 & #2	REQUIRED		EXISTS	
	MAJOR	MINOR	MAJOR	MINOR
WARRANT #1	480	120	490	35
WARRANT #2	720	60	490	35
% OF WARRANT MET			85%	44%

WARRANT #9 - FOUR HOUR VOLUMES				
	MAJOR	MINOR	CURVE NO.	WARRANT
4TH HIGHEST HOUR	612	90	FIGURE	YES
NUMBER OF LANES	2	1	4.8	NO

WARRANT #10 - PEAK HOUR DELAY				
PEAK HOUR:	MINOR LEG		TOTAL ENTERING	
	DELAY	VOLUME	4 LEGS	3 LEGS
REQUIRED VALUES	4	100	800	650
EXISTING VALUES	0.2	102		740

WARRANT #11 - PEAK HOUR VOLUME				
	MAJOR	MINOR	CURVE NO.	WARRANT
PEAK HOUR	690	102	FIGURE	YES
NUMBER OF LANES	2	1	4.6	NO

SUMMARY OF WARRANTS SATISFIED					
WARRANT 1		WARRANT 5		WARRANT 9	
WARRANT 2		WARRANT 6		WARRANT 10	
WARRANT 3		WARRANT 7		WARRANT 11	
WARRANT 4		WARRANT 8		TOTAL =	0



## SECTION 6.

### IMPROVEMENTS COST ESTIMATES





## SEVENTH &amp; RIVER STREETS

## IMPROVEMENT COST ESTIMATE

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
1	NEW SIGNS (<6 SF)	6	Ea	\$100.00	\$600.00
2	NEW SIGNS (6.1 TO 10 SF)	0	Ea	\$140.00	\$0.00
3	NEW SUPPLEMENTARY SIGNS	0	Ea	\$50.00	\$0.00
4	RELOCATE SIGNS	0	Ea	\$40.00	\$0.00
5	REMOVE SIGNS	0	Ea	\$20.00	\$0.00
6	PAVE. MARKINGS (PAINT)	0	Gal	\$30.00	\$0.00
7	PAVE. MARKING PLASTIC	0	SF	\$6.00	\$0.00
8	DELINEATORS, FLEXIBLE	0	Ea	\$20.00	\$0.00
9	TRIM TREES	1	LS	\$50.00	\$50.00
10	APPROACH WORK	0	LS	\$0.00	\$0.00

TOTAL CONSTRUCTION COSTS = \$650.00

## THIRD &amp; MADISON STREETS

## IMPROVEMENT COST ESTIMATE

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
1	NEW SIGNS (<6 SF)	4	Ea	\$100.00	\$400.00
2	NEW SIGNS (6.1 TO 10 SF)	0	Ea	\$140.00	\$0.00
3	NEW SUPPLEMENTARY SIGNS	0	Ea	\$50.00	\$0.00
4	RELOCATE SIGNS	1	Ea	\$40.00	\$40.00
5	REMOVE SIGNS	0	Ea	\$20.00	\$0.00
6	PAVE. MARKINGS (PAINT)	8	Gal	\$30.00	\$240.00
7	PAVE. MARKING PLASTIC	0	SF	\$6.00	\$0.00
8	DELINEATORS, FLEXIBLE	0	Ea	\$20.00	\$0.00
9	TRIM TREES	1	LS	\$50.00	\$50.00
10	RELOCATE LIGHT POLE	1	LS	\$200.00	\$200.00

TOTAL CONSTRUCTION COSTS = \$930.00

## SEVENTH &amp; MADISON

## IMPROVEMENT COST ESTIMATE

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
1	NEW SIGNS (<6 SF)	7	Ea	\$100.00	\$700.00
2	NEW SIGNS (6.1 TO 10 SF)	0	Ea	\$140.00	\$0.00
3	NEW SUPPLEMENTARY SIGNS	0	Ea	\$50.00	\$0.00
4	RELOCATE SIGNS	0	Ea	\$40.00	\$0.00
5	REMOVE SIGNS	0	Ea	\$20.00	\$0.00
6	PAVE. MARKINGS (PAINT)	0	Gal	\$30.00	\$0.00
7	PAVE. MARKING PLASTIC	0	SF	\$6.00	\$0.00
8	DELINEATORS, FLEXIBLE	0	Ea	\$20.00	\$0.00
9	TRIM TREES	0	LS	\$50.00	\$0.00
10	RELOCATE LIGHT POLE	0	LS	\$200.00	\$0.00



## FIFTH &amp; MADISON

## IMPROVEMENT COST ESTIMATE

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
1	NEW SIGNS (<6 SF)	4	Ea	\$100.00	\$400.00
2	NEW SIGNS (6.1 TO 10 SF)	0	Ea	\$140.00	\$0.00
3	NEW SUPPLEMENTARY SIGNS	0	Ea	\$50.00	\$0.00
4	RELOCATE SIGNS	0	Ea	\$40.00	\$0.00
5	REMOVE SIGNS	0	Ea	\$20.00	\$0.00
6	PAVE. MARKINGS (PAINT)	8	Gal	\$30.00	\$240.00
7	PAVE. MARKING PLASTIC	0	SF	\$6.00	\$0.00
8	DELINEATORS, FLEXIBLE	0	Ea	\$20.00	\$0.00
9	TRIM TREES	0	LS	\$50.00	\$0.00
10	RELOCATE LIGHT POLE	0	LS	\$200.00	\$0.00

TOTAL CONSTRUCTION COSTS = \$640.00

## RIVERSIDE CUTOFF - US 93

## IMPROVEMENT COST ESTIMATE

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
1	NEW SIGNS (<6 SF)	0	Ea	\$100.00	\$0.00
2	NEW SIGNS (6.1 TO 10 SF)	4	Ea	\$140.00	\$560.00
3	NEW SUPPLEMENTARY SIGNS	0	Ea	\$50.00	\$0.00
4	RELOCATE SIGNS	4	Ea	\$40.00	\$160.00
5	REMOVE SIGNS	2	Ea	\$20.00	\$40.00
6	PAVE. MARKINGS (PAINT)	10	Gal	\$30.00	\$300.00
7	PAVE. MARKING PLASTIC	200	SF	\$6.00	\$1,200.00
8	DELINEATORS, FLEXIBLE	2	Ea	\$20.00	\$40.00
9	RECONSTRUCTION	1	LS	\$15,000.00	\$15,000.00
10	MISCELLANEOUS	1	LS	\$500.00	\$500.00

TOTAL CONSTRUCTION COSTS = \$17,800.00

## MAIN STREET, 1ST TO 4TH

## IMPROVEMENT COST ESTIMATE

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
1	NEW SIGNS (<6 SF)	26	Ea	\$100.00	\$2,600.00
2	NEW SIGNS (6.1 TO 10 SF)	2	Ea	\$140.00	\$280.00
3	NEW SUPPLEMENTARY SIGNS	2	Ea	\$50.00	\$100.00
4	RELOCATE SIGNS	6	Ea	\$40.00	\$240.00
5	REMOVE SIGNS	31	Ea	\$20.00	\$620.00
6	PAVE. MARKINGS (PAINT)	40	Gal	\$30.00	\$1,200.00
7	PAVE. MARKING PLASTIC	2600	SF	\$6.00	\$15,600.00
8	DELINEATORS, FLEXIBLE	0	Ea	\$20.00	\$0.00
9	TRAFFIC SIGNAL COMPLETE	2	LS	\$70,000.00	\$140,000.00
10	MISCELLANEOUS	1	LS	\$4,000.00	\$4,000.00

TOTAL CONSTRUCTION COSTS = \$164,640.00



## STATE STREET, 1ST TO 9TH

## IMPROVEMENT COST ESTIMATE

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
1	NEW SIGNS (<6 SF)	36	Ea	\$100.00	\$3,600.00
2	NEW SIGNS (6.1 TO 10 SF)	11	Ea	\$140.00	\$1,540.00
3	NEW SUPPLEMENTARY SIGNS	4	Ea	\$50.00	\$200.00
4	RELOCATE SIGNS	16	Ea	\$40.00	\$640.00
5	REMOVE SIGNS	0	Ea	\$20.00	\$0.00
6	PAVE. MARKINGS (PAINT)	65	Gal	\$30.00	\$1,950.00
7	PAVE. MARKING PLASTIC	2100	SF	\$6.00	\$12,600.00
8	DELINEATORS, FLEXIBLE	0	Ea	\$20.00	\$0.00
9	TRAFFIC SIGNAL COMPLETE	0	LS	\$70,000.00	\$0.00
10	MISCELLANEOUS	1	LS	\$2,000.00	\$2,000.00

TOTAL CONSTRUCTION COSTS = \$22,530.00

## THIRD STREET, PINE TO NEW YORK

## IMPROVEMENT COST ESTIMATE

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
1	NEW SIGNS (<6 SF)	28	Ea	\$100.00	\$2,800.00
2	NEW SIGNS (6.1 TO 10 SF)	2	Ea	\$140.00	\$280.00
3	NEW SUPPLEMENTARY SIGNS	0	Ea	\$50.00	\$0.00
4	RELOCATE SIGNS	0	Ea	\$40.00	\$0.00
5	REMOVE SIGNS	2	Ea	\$20.00	\$40.00
6	PAVE. MARKINGS (PAINT)	0	Gal	\$30.00	\$0.00
7	PAVE. MARKING PLASTIC	0	SF	\$6.00	\$0.00
8	DELINEATORS, FLEXIBLE	0	Ea	\$20.00	\$0.00
9	TRIM TREES	1	LS	\$150.00	\$150.00
10	MISCELLANEOUS	0	LS	\$2,000.00	\$0.00

TOTAL CONSTRUCTION COSTS = \$3,270.00

## SECOND STREET, GROVE TO RIVER

## IMPROVEMENT COST ESTIMATE

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
1	NEW SIGNS (<6 SF)	72	Ea	\$100.00	\$7,200.00
2	NEW SIGNS (6.1 TO 10 SF)	9	Ea	\$140.00	\$1,260.00
3	NEW SUPPLEMENTARY SIGNS	0	Ea	\$50.00	\$0.00
4	RELOCATE SIGNS	12	Ea	\$40.00	\$480.00
5	REMOVE SIGNS	30	Ea	\$20.00	\$600.00
6	PAVE. MARKINGS (PAINT)	90	Gal	\$30.00	\$2,700.00
7	PAVE. MARKING PLASTIC	1200	SF	\$6.00	\$7,200.00
8	DELINEATORS, FLEXIBLE	0	Ea	\$20.00	\$0.00
9	TRIM TREES	1	LS	\$100.00	\$100.00
10	RECONSTRUCT CROSS DRAINS	1	LS	\$5,000.00	\$5,000.00

TOTAL CONSTRUCTION COSTS = \$24,540.00



## FIRST STREET (US 93) CORRIDOR

## IMPROVEMENT COST ESTIMATE

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
1	NEW SIGNS (<6 SF)	0	Ea	\$100.00	\$0.00
2	NEW SIGNS (6.1 TO 10 SF)	18	Ea	\$140.00	\$2,520.00
3	NEW SUPPLEMENTARY SIGNS	0	Ea	\$50.00	\$0.00
4	RELOCATE SIGNS	0	Ea	\$40.00	\$0.00
5	REMOVE SIGNS	16	Ea	\$20.00	\$320.00
6	PAVE. MARKINGS (PAINT)	0	Gal	\$30.00	\$0.00
7	PAVE. MARKING PLASTIC	1200	SF	\$6.00	\$7,200.00
8	NEW SIDEWALK SECTIONS	12	SY	\$20.00	\$240.00
9	OPTICOM SYSTEMS	3	EA	\$5,000.00	\$15,000.00
10	MISCELLANEOUS	1	LS	\$5,000.00	\$5,000.00

TOTAL CONSTRUCTION COSTS = \$30,280.00

## PINCKNEY CORRIDOR

## IMPROVEMENT COST ESTIMATE

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
1	NEW SIGNS (<6 SF)	0	Ea	\$100.00	\$0.00
2	NEW SIGNS (6.1 TO 10 SF)	0	Ea	\$140.00	\$0.00
3	NEW SUPPLEMENTARY SIGNS	0	Ea	\$50.00	\$0.00
4	RELOCATE SIGNS	6	Ea	\$40.00	\$240.00
5	REMOVE SIGNS	0	Ea	\$20.00	\$0.00
6	PAVE. MARKINGS (PAINT)	24	Gal	\$30.00	\$720.00
7	PAVE. MARKING PLASTIC	1300	SF	\$6.00	\$7,800.00
8	DELINEATORS, FLEXIBLE	0	Ea	\$20.00	\$0.00
9	TRIM TREES	0	LS	\$50.00	\$0.00
10	APPROACH WORK	0	LS	\$0.00	\$0.00

TOTAL CONSTRUCTION COSTS = \$8,760.00

## CITIZENS BANK

## IMPROVEMENT COST ESTIMATE

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
1	NEW SIGNS (<6 SF)	0	Ea	\$100.00	\$0.00
2	NEW SIGNS (6.1 TO 10 SF)	2	Ea	\$140.00	\$280.00
3	NEW SUPPLEMENTARY SIGNS	0	Ea	\$50.00	\$0.00
4	RELOCATE SIGNS	6	Ea	\$40.00	\$240.00
5	REMOVE SIGNS	0	Ea	\$20.00	\$0.00
6	PAVE. MARKINGS (PAINT)	24	Gal	\$30.00	\$720.00
7	PAVE. MARKING PLASTIC	0	SF	\$6.00	\$0.00
8	NEW SIDEWALK	90	SY	\$20.00	\$1,800.00
9	REMOVE CURB	1	LS	\$3,000.00	\$3,000.00
10	NEW CURB AND LANDSCAPE	1	LS	\$7,000.00	\$7,000.00

TOTAL CONSTRUCTION COSTS = \$13,040.00







## IMPROVEMENT COST ESTIMATE

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
1	NEW SIGNS (<6 SF)	0	Ea	\$100.00	\$0.00
2	NEW SIGNS (6.1 TO 10 SF)	7	Ea	\$140.00	\$980.00
3	NEW SUPPLEMENTARY SIGNS	0	Ea	\$50.00	\$0.00
4	RELOCATE SIGNS	0	Ea	\$40.00	\$0.00
5	REMOVE SIGNS	6	Ea	\$20.00	\$120.00
6	PAVE. MARKINGS (PAINT)	24	Gal	\$30.00	\$720.00
7	PAVE. MARKING PLASTIC	100	SF	\$6.00	\$600.00
8	NEW SIDEWALK	80	SY	\$20.00	\$1,600.00
9	REMOVE CURB	1	LS	\$900.00	\$900.00
10	NEW CURB AND ISLAND	1	LS	\$3,500.00	\$3,500.00

TOTAL CONSTRUCTION COSTS = \$8,420.00

## HAMILTON HIGH

## IMPROVEMENT COST ESTIMATE

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
1	NEW SIGNS (<6 SF)	0	Ea	\$100.00	\$0.00
2	NEW SIGNS (6.1 TO 10 SF)	8	Ea	\$140.00	\$1,120.00
3	NEW SUPPLEMENTARY SIGNS	0	Ea	\$50.00	\$0.00
4	RELOCATE SIGNS	0	Ea	\$40.00	\$0.00
5	REMOVE SIGNS	0	Ea	\$20.00	\$0.00
6	PAVE. MARKINGS (PAINT)	20	Gal	\$30.00	\$600.00
7	PAVE. MARKING PLASTIC	500	SF	\$6.00	\$3,000.00
8	PIN DOWN CURB	100	LF	\$8.00	\$800.00
9	FENCE & GATES	1	LS	\$1,000.00	\$1,000.00
10	NEW CURB AND ISLAND	0	LS	\$3,500.00	\$0.00

TOTAL CONSTRUCTION COSTS = \$6,520.00

## DALY ELEMENTARY SCHOOL

## IMPROVEMENT COST ESTIMATE

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
1	NEW SIGNS (<6 SF)	6	Ea	\$100.00	\$600.00
2	NEW SIGNS (6.1 TO 10 SF)	10	Ea	\$140.00	\$1,400.00
3	NEW SUPPLEMENTARY SIGNS	0	Ea	\$50.00	\$0.00
4	RELOCATE SIGNS	0	Ea	\$40.00	\$0.00
5	REMOVE SIGNS	0	Ea	\$20.00	\$0.00
6	PAVE. MARKINGS (PAINT)	10	Gal	\$30.00	\$300.00
7	PAVE. MARKING PLASTIC	250	SF	\$6.00	\$1,500.00
8	SITE WORK & PAVING	1	LS	\$10,000.00	\$10,000.00
9	NEW CURBS & ISLANDS	1	LS	\$4,800.00	\$4,800.00
10	NEW SIDEWALK	1	LS	\$3,500.00	\$3,500.00

TOTAL CONSTRUCTION COSTS = \$22,100.00



## IMPROVEMENT COST ESTIMATE

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
1	NEW SIGNS (<6 SF)	4	Ea	\$100.00	\$400.00
2	NEW SIGNS (6.1 TO 10 SF)	4	Ea	\$140.00	\$560.00
3	NEW SUPPLEMENTARY SIGNS	4	Ea	\$50.00	\$200.00
4	RELOCATE SIGNS	5	Ea	\$40.00	\$200.00
5	REMOVE SIGNS	3	Ea	\$20.00	\$60.00
6	PAVE. MARKINGS (PAINT)	10	Gal	\$30.00	\$300.00
7	PAVE. MARKING PLASTIC	50	SF	\$6.00	\$300.00
8	REMOVE CURB & GUTTER	1	LS	\$500.00	\$500.00
9	NEW CURBS & ISLANDS	1	LS	\$4,800.00	\$4,800.00
10	NEW SIDEWALK	220	SY	\$20.00	\$4,400.00

TOTAL CONSTRUCTION COSTS =

\$11,720.00

## ASSEMBLY OF GOD SCHOOL

## IMPROVEMENT COST ESTIMATE

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
1	NEW SIGNS (<6 SF)	0	Ea	\$100.00	\$0.00
2	NEW SIGNS (6.1 TO 10 SF)	4	Ea	\$140.00	\$560.00
3	NEW SUPPLEMENTARY SIGNS	4	Ea	\$50.00	\$200.00
4	RELOCATE SIGNS	0	Ea	\$40.00	\$0.00
5	REMOVE SIGNS	0	Ea	\$20.00	\$0.00
6	PAVE. MARKINGS (PAINT)	0	Gal	\$30.00	\$0.00
7	PAVE. MARKING PLASTIC	100	SF	\$6.00	\$600.00
8	REMOVE CURB & GUTTER	0	LS	\$500.00	\$0.00
9	NEW CURBS & ISLANDS	0	LS	\$4,800.00	\$0.00
10	NEW SIDEWALK	0	SY	\$20.00	\$0.00

TOTAL CONSTRUCTION COSTS =

\$1,360.00

## REPLACE STREET NAME SIGNS

## IMPROVEMENT COST ESTIMATE

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
1	NEW SIGNS (<6 SF)	360	Ea	\$100.00	\$36,000.00
2	NEW SIGNS (6.1 TO 10 SF)	0	Ea	\$140.00	\$0.00
3	NEW SUPPLEMENTARY SIGNS	0	Ea	\$50.00	\$0.00
4	RELOCATE SIGNS	0	Ea	\$40.00	\$0.00
5	REMOVE SIGNS	0	Ea	\$20.00	\$0.00
6	PAVE. MARKINGS (PAINT)	0	Gal	\$30.00	\$0.00
7	PAVE. MARKING PLASTIC	0	SF	\$6.00	\$0.00
8	REMOVE CURB & GUTTER	0	LS	\$500.00	\$0.00
9	NEW CURBS & ISLANDS	0	LS	\$4,800.00	\$0.00
10	NEW SIDEWALK	0	SY	\$20.00	\$0.00

TOTAL CONSTRUCTION COSTS =

\$36,000.00



# REPLACE OLD STOP SIGNS

## IMPROVEMENT COST ESTIMATE

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
1	NEW SIGNS (<6 SF)	0	Ea	\$100.00	\$0.00
2	NEW SIGNS (6.1 TO 10 SF)	40	Ea	\$140.00	\$5,600.00
3	NEW SUPPLEMENTARY SIGNS	0	Ea	\$50.00	\$0.00
4	RELOCATE SIGNS	0	Ea	\$40.00	\$0.00
5	REMOVE SIGNS	0	Ea	\$20.00	\$0.00
6	PAVE. MARKINGS (PAINT)	0	Gal	\$30.00	\$0.00
7	PAVE. MARKING PLASTIC	0	SF	\$6.00	\$0.00
8	REMOVE CURB & GUTTER	0	LS	\$500.00	\$0.00
9	NEW CURBS & ISLANDS	0	LS	\$4,800.00	\$0.00
10	NEW SIDEWALK	0	SY	\$20.00	\$0.00

TOTAL CONSTRUCTION COSTS = \$5,600.00



## SECTION 7.

### ACCIDENT REDUCTION ESTIMATES





SEVENTH & RIVER

ACCIDENT REDUCTION ESTIMATE

ACCIDENT TYPE	# ACC. IN PERIOD		EST. % CHANGE	CHANGE IN # ACC.	
	I/F	PD		I/F	PD
HEAD ON	0	0	0%	0.0	0.0
ANGLE	1	4	60%	0.6	2.4
LEFT TURN	0	0	0%	0.0	0.0
SIDE SWIPE	0	0	0%	0.0	0.0
REAR END	0	0	0%	0.0	0.0
SINGLE VEHICLE	0	0	0%	0.0	0.0
PEDESTRIAN	0	0	0%	0.0	0.0
OTHER	0	0	0%	0.0	0.0
TOTALS :	1	4	***	0.6	2.4

% REDUCTION IN INJURY/FATAL ACCIDENTS = 60.0%

% REDUCTION IN PROPERTY DAMAGE ACCIDENTS = 60.0%

THIRD & MADISON

ACCIDENT REDUCTION ESTIMATE

ACCIDENT TYPE	# ACC. IN PERIOD		EST. % CHANGE	CHANGE IN # ACC.	
	I/F	PD		I/F	PD
HEAD ON	0	0	0%	0.0	0.0
ANGLE	2	4	30%	0.6	1.2
LEFT TURN	0	0	0%	0.0	0.0
SIDE SWIPE	1	0	0%	0.0	0.0
REAR END	0	0	0%	0.0	0.0
SINGLE VEHICLE	0	0	0%	0.0	0.0
PEDESTRIAN	0	0	0%	0.0	0.0
OTHER	0	0	0%	0.0	0.0
TOTALS :	3	4	***	0.6	1.2

% REDUCTION IN INJURY/FATAL ACCIDENTS = 20.0%

% REDUCTION IN PROPERTY DAMAGE ACCIDENTS = 30.0%



SEVENTH & MADISON ACCIDENT REDUCTION ESTIMATE

ACCIDENT TYPE	# ACC. IN PERIOD		EST. % CHANGE	CHANGE IN # ACC.	
	I/F	PD		I/F	PD
HEAD ON	0	0	0%	0.0	0.0
ANGLE	1	2	60%	0.6	1.2
LEFT TURN	0	0	0%	0.0	0.0
SIDE SWIPE	0	0	0%	0.0	0.0
REAR END	0	0	0%	0.0	0.0
SINGLE VEHICLE	0	1	60%	0.0	0.6
PEDESTRIAN	0	0	0%	0.0	0.0
OTHER	0	0	0%	0.0	0.0
TOTALS :	1	3	***	0.6	1.8

% REDUCTION IN INJURY/FATAL ACCIDENTS = 60.0%  
 % REDUCTION IN PROPERTY DAMAGE ACCIDENTS = 60.0%

FIFTH & MADISON ACCIDENT REDUCTION ESTIMATE

ACCIDENT TYPE	# ACC. IN PERIOD		EST. % CHANGE	CHANGE IN # ACC.	
	I/F	PD		I/F	PD
HEAD ON	0	0	0%	0.0	0.0
ANGLE	2	1	60%	1.2	0.6
LEFT TURN	0	0	0%	0.0	0.0
SIDE SWIPE	0	0	0%	0.0	0.0
REAR END	0	0	0%	0.0	0.0
SINGLE VEHICLE	0	0	0%	0.0	0.0
PEDESTRIAN	0	0	0%	0.0	0.0
OTHER	0	0	0%	0.0	0.0
TOTALS :	2	1	***	1.2	0.6

% REDUCTION IN INJURY/FATAL ACCIDENTS = 60.0%  
 % REDUCTION IN PROPERTY DAMAGE ACCIDENTS = 60.0%



US 93 - RIVERSIDE CUTOFF ACCIDENT REDUCTION ESTIMATE

ACCIDENT TYPE	# ACC. IN PERIOD		EST. % CHANGE	CHANGE IN # ACC.	
	I/F	PD		I/F	PD
HEAD ON	0	0	0%	0.0	0.0
ANGLE	5	1	60%	3.0	0.6
LEFT TURN	0	0	0%	0.0	0.0
SIDE SWIPE	0	1	60%	0.0	0.6
REAR END	0	1	0%	0.0	0.0
SINGLE VEHICLE	0	0	0%	0.0	0.0
PEDESTRIAN	0	0	0%	0.0	0.0
OTHER	0	3	0%	0.0	0.0
TOTALS :	5	6	***	3.0	1.2

% REDUCTION IN INJURY/FATAL ACCIDENTS = 60.0%  
 % REDUCTION IN PROPERTY DAMAGE ACCIDENTS = 20.0%

MAIN STREET CORRIDOR ACCIDENT REDUCTION ESTIMATE

ACCIDENT TYPE	# ACC. IN PERIOD		EST. % CHANGE	CHANGE IN # ACC.	
	I/F	PD		I/F	PD
HEAD ON	0	0	0%	0.0	0.0
ANGLE	0	1	60%	0.0	0.6
LEFT TURN	0	0	0%	0.0	0.0
SIDE SWIPE	0	1	60%	0.0	0.6
REAR END	1	3	20%	0.2	0.6
SINGLE VEHICLE	0	1	0%	0.0	0.0
PEDESTRIAN	0	0	0%	0.0	0.0
OTHER	3	26	50%	1.5	13.0
TOTALS :	4	32	***	1.7	14.8

% REDUCTION IN INJURY/FATAL ACCIDENTS = 42.5%  
 % REDUCTION IN PROPERTY DAMAGE ACCIDENTS = 46.3%

*Rel  
60%*



STATE STREET CORRIDOR ACCIDENT REDUCTION ESTIMATE

ACCIDENT TYPE	# ACC. IN PERIOD		EST. % CHANGE	CHANGE IN # ACC.	
	I/F	PD		I/F	PD
HEAD ON	0	0	0%	0.0	0.0
ANGLE	2	12	60%	1.2	7.2
LEFT TURN	0	2	40%	0.0	0.8
SIDE SWIPE	0	2	20%	0.0	0.4
REAR END	0	4	20%	0.0	0.8
SINGLE VEHICLE	0	2	0%	0.0	0.0
PEDESTRIAN	1	0	50%	0.5	0.0
OTHER	1	6	80%	0.8	4.8
TOTALS :	4	28	***	2.5	14.0

% REDUCTION IN INJURY/FATAL ACCIDENTS = 62.5%  
 % REDUCTION IN PROPERTY DAMAGE ACCIDENTS = 50.0%

THIRD STREET CORRIDOR ACCIDENT REDUCTION ESTIMATE

ACCIDENT TYPE	# ACC. IN PERIOD		EST. % CHANGE	CHANGE IN # ACC.	
	I/F	PD		I/F	PD
HEAD ON	0	0	0%	0.0	0.0
ANGLE	5	7	40%	2.0	2.8
LEFT TURN	0	0	0%	0.0	0.0
SIDE SWIPE	0	0	0%	0.0	0.0
REAR END	0	0	0%	0.0	0.0
SINGLE VEHICLE	1	0	0%	0.0	0.0
PEDESTRIAN	0	0	0%	0.0	0.0
OTHER	0	0	0%	0.0	0.0
TOTALS :	6	7	***	2.0	2.8

% REDUCTION IN INJURY/FATAL ACCIDENTS = 33.3%  
 % REDUCTION IN PROPERTY DAMAGE ACCIDENTS = 40.0%





SECOND STREET CORRIDOR ACCIDENT REDUCTION ESTIMATE

ACCIDENT TYPE	# ACC. IN PERIOD		EST. % CHANGE	CHANGE IN # ACC.	
	I/F	PD		I/F	PD
HEAD ON	0	0	0%	0.0	0.0
ANGLE	5	11	30%	1.5	3.3
LEFT TURN	0	0	0%	0.0	0.0
SIDE SWIPE	0	0	0%	0.0	0.0
REAR END	0	1	10%	0.0	0.1
SINGLE VEHICLE	0	0	0%	0.0	0.0
PEDESTRIAN	1	0	50%	0.5	0.0
OTHER	2	29	60%	1.2	17.4
TOTALS :	8	41	***	3.2	20.8

% REDUCTION IN INJURY/FATAL ACCIDENTS = 40.0%  
 % REDUCTION IN PROPERTY DAMAGE ACCIDENTS = 50.7%

US 93 CORRIDOR ACCIDENT REDUCTION ESTIMATE

ACCIDENT TYPE	# ACC. IN PERIOD		EST. % CHANGE	CHANGE IN # ACC.	
	I/F	PD		I/F	PD
HEAD ON	0	0	0%	0.0	0.0
ANGLE	10	23	10%	1.0	2.3
LEFT TURN	7	17	60%	4.2	10.2
SIDE SWIPE	1	7	5%	0.1	0.4
REAR END	8	31	0%	0.0	0.0
SINGLE VEHICLE	3	8	0%	0.0	0.0
PEDESTRIAN	6	1	40%	2.4	0.4
OTHER	1	7	10%	0.1	0.7
TOTALS :	36	94	***	7.8	14.0

% REDUCTION IN INJURY/FATAL ACCIDENTS = 21.5%  
 % REDUCTION IN PROPERTY DAMAGE ACCIDENTS = 14.8%



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| PINCKNEY CORRIDOR      ACCIDENT REDUCTION ESTIMATE |  
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ACCIDENT TYPE	# ACC. IN PERIOD		EST. % CHANGE	CHANGE IN # ACC.	
	I/F	PD		I/F	PD
HEAD ON	0	0	0%	0.0	0.0
ANGLE	1	1	100%	0.0	0.0
LEFT TURN	0	0	0%	0.0	0.0
SIDE SWIPE	0	2	15%	0.0	0.3
REAR END	0	3	30%	0.0	0.9
SINGLE VEHICLE	0	2	5%	0.0	0.1
PEDESTRIAN	0	0	0%	0.0	0.0
OTHER	0	9	40%	0.0	3.6
TOTALS :	1	17	***	0.0	4.9

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| % REDUCTION IN INJURY/FATAL ACCIDENTS = 10.0% |  
| % REDUCTION IN PROPERTY DAMAGE ACCIDENTS = 28.8% |  
+-----+

